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BSCCP 2019: Book of Abstracts

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Oral Abstracts

O – 1

The use of Human Papillomavirus DNA Methylation in Cervical Intraepithelial Neoplasia: a Systematic Review and Meta-analysis

Dr Sarah Lever, Dr Ikka Kalliala[1,2], Dr Areti Veroniki[1,3], Dr Marc Arbyn[4], Dr Kostas Lathouras[1], Dr Anita Mitra[1], Dr Lisa Mirabello[5], Prof Evangelos Paraskevaidis[3], Dr James Flanagan[1], Dr Maria Kyrgiou[1]

[1]Department of Surgery and Cancer, Imperial College London, United Kingdom, [2]Department of Obstetrics and Gynaecology, University of Helsinki, Finland, [3]School of Education, University Hospital of Ioannina, Greece, [4]Unit of Cancer Epidemiology, Scientific Institute of Public Health, Brussels, Belgium, [5]National Institute of Health (NIH), Bethesda, USA

Introduction / Background

Methylation of viral DNA has been proposed as a novel biomarker for triage of HPV positive women at screening with encouraging results, although results vary across different HPV subtypes, gene and CpG sites. This systematic review and meta-analysis aimed to assess how methylation levels change with disease severity and to determine its diagnostic accuracy in detecting high-grade cervical intra-epithelial neoplasia (CIN) in HPV positive women.

Aims / Methodology

We searched relevant studies in MEDLINE, PUBMED and CENTRAL from inception to September 2018. Studies were eligible if they explored HPV methylation levels in CIN. Data were extracted in duplicate and additionally requested from authors where necessary. Random-effects models and a bivariate mixed-effects binary regression model were applied to determine pooled effect estimates for the association between methylation and disease grade and diagnostic test accuracy (DTA) of methylation in predicting CIN.

Results

43 studies with 8775 women were eligible for inclusion. Pooled estimates of methylation levels were significantly higher in CIN2 or worse (≥CIN2/HSIL) vs. CIN1 or less (≤CIN1/LSIL), with a mean difference in the L1 gene of 14.11% (95% CI 7.06-21.17). Overall pooled estimated odds ratio (OR) for high methylation in HPV16 L1 gene in ≥CIN2/HSIL vs. ≤CIN1/LSIL was 6.57 (3.49-12.39). Pooled sensitivity and specificity of high methylation in predicting ≥CIN2/HSIL for HPV16 varied by genotype and gene, with L1 at 81% (69-89%) and 64% (57-70%) respectively, with an estimated area under the curve (AUC) of 0.72 (0.67-0.75). Following a positive HPV16 L1 methylation result, risk of ≥CIN2/HSIL in an HPV 16+ woman at screening rose from 15.0% to 28.5%.

Interpretation

Increasing HPV methylation in L1 and L2 genes is associated with increasing grade of CIN. The L1 gene has the most evidence and greatest discrimination as a diagnostic marker. HPV methylation is a promising molecular marker for the triage of HPV positive women at screening, but further evaluation is warranted

O – 2

Uptake of Cervical Screening in and Around Pregnancy - How Can we Improve it? Qualitative Survey Data from Recently Pregnant Women in Somerset

Dr Sarah Coleridge, Miss Jo Morrison, Ms Liz Truman

Taunton and Somerset NHS Foundation Trust, Taunton, United Kingdom

Introduction / Background

Cervical Screening uptake is at its lowest since 1988. In Somerset, a number of women have been diagnosed with cervical cancer shortly after one or more pregnancies. Pregnant and recently post-natal women have multiple contacts with health professionals providing opportunities to promote cervical screening. As the peak incidence of cervical cancer is age 25-30 years, coinciding with the average age of a first-time mother, there is potential to inform and educate women about the benefits of cervical screening, so they can make an informed choice about attendance. We are undertaking improvement work to increase the uptake of cervical screening and identify how we might promote the cervical screening.

Aims / Methodology

A cohort of 400 women in 2016-17 attended antenatal birth preparation classes (WiseHippo) run by and at Musgrove Park Hospital, Somerset. A survey was sent out to these women with specific questions around cervical screening.

Results

100 women (25%) responded with fixed option answers and free text responses. Only a third of women were provided with any information about cervical screening in pregnancy. 32 women were either not up to date with their smears or unsure, of those 74.1% did not have this investigated further by their healthcare provider. 32/100 received an invitation for screening during their pregnancy; yet only 26.3% were correctly advised about when this should be performed.

Conclusions

If women aren't up to date with their cervical screening when pregnant or recently post-natal, they do not appear to receive adequate or accurate information regarding when they can have cervical screening. The qualitative comments provided by the women show that they are open to discussing cervical screening when pregnant or post-natal. By not doing so, healthcare providers are missing a significant opportunity to promote cervical screening to women when they might be at their most receptive.

O – 3

Good Performance of P16/Ki-67 Dual-stained Cytology for Detection and Post-treat Surveillance of High-grade CIN/VAIN in a Retrospective Study

Mrs Qin Yao, Miss Wei Liu, Mrs Jinping Gong, Mrs Yuchao Diao, Mrs Kejuan Song, Mrs Shuzhen Dai

Department Of Obstetrics and Gynaecology, Affiliated Hospital Of Qingdao University, Qingdao, China, Qing Dao City, China

Background

The limited sensitivity of cytology and low specificity of HPV detection in detecting cervical or vaginal lesions means that either cancers are missed, or women are over-treated. To improve performance outcomes, the p16/Ki-67 dual-stained cytology has been introduced used as additional biomarker.

Materials and Methods

A prospective, cross-sectional study was performed in the Department of Obstetrics and Gynecology, in collaboration with Department of Pathology over 13 months including 573 patients. Clinical performance estimates of cytology, HPV, p16/Ki-67 testing for the detection of CIN2+/VAIN2+ were determined and compared to each other. Immunocytochemistry followed by colposcopy-guided biopsy or/and cervical conization were performed in 313 cases with epithelial abnormalities.

Results

The sensitivity and specifcity of the dual stain in detecting histology proven CIN 2+/VAIN2+ was 83.0% and 89.8%, while cytology was 41.5% and 91.8%, HPV testing was 99.3% and 10.2%, respectively. Of the women with NILM or ASCUS on cytology, the dual stain reduced the number of unnecessary colposcopy referrals from 311 to 194 when used as a triage marker compared to HPV testing. The dual stain also found 4 women with high-grade lesion by diagnositic conization but negative colposcopy-guided biopsy.

Conclusions

This dual immunostaining may potentially be a useful tool in prediction and post-treat surveillance of high-grade, considering the high sensitivity and specifcity values. Application of this method could lead to a reduction of unnecessary colposcopy referrals and misdiagnosis.

Keywords

p16/Ki-67 dual-stained cytology; Cytology; Human papillomavirus (HPV); Cervical Intraepithelial Neoplasia (CIN); Vaginal Intraepithelial Neoplasia（VAIN）; Diagnosis; Conization

O – 4

Risk of Developing Vaginal Cancer Among Hysterectomised Women with Cervical Intraepithelial Neoplasia or Cervical Cancer- a Population Based National Cohort Study

Professor Björn Strander, Dr Emilia Alfonzo[1], PhD Erik Holmberg[2], Professor Pär Sparén[3]

[1]Sahlgrenska Academy at the University of Gothenburg, Göteborg, Sweden, [2]The Regional Cancer Center Western Sweden, Sahlgrenska University Hospital Gothenburg, Sweden, Göteborg, Sweden, [3]Department of Medical epidemiology and Biostatistics, Karolinska institute, Stockholm, Sweden, Stockholm, Sweden

Introduction / Background

The risk for cervical cancer is eliminated after hysterectomy but the remaining risk for vaginal cancer is unknown.

Aims / Methodology

Our aim was to clarify if hysterectomy protects against HPV induced cancer in the vaginal target organ, vagina or cervix or if the elimination of the risk for cervical cancer is on behalf of a subsequent increase in vaginal cancer. Moreover, we wanted to determine if hysterectomised women with a CIN-background should be monitored after surgery. We conducted a population based national study analysing incidence rates, incidence rate ratios, cumulative incidence for vaginal cancer among hysterectomised women as well as non-hysterectomised women with and without risk factors for vaginal cancer. In addition, we also wanted to assess the need for long time monitoring. We included all adult Swedish women, 1987–2011, using national registries. 4,9 million women were included.

Results

There were 847 cases of vaginal cancer. Women with a history of CIN3 or CIN at time of hysterectomy had high incidence rates of vaginal cancer (IR per 100 000 person years: 25.4 and 48.8 respectively). Incidence rate ratios adjusted for attained age of vaginal cancer were 7.67 and 14.76 for the two groups respectively, compared with women hysterectomised with benign background who had a low risk of developing vaginal cancer (IR 3,31). Hysterectomised women over 60 years with a history of CIN3, CIN at the time of operation or cervical cancer had particular high incidence rates for vaginal cancer (IR per 100 000 person years: 46.2, 51.7 and 32.9 respectively).

Hysterectomised women with CIN3 history or CIN at the time of operation have a high risk of developing vaginal cancer. Our findings suggest that hysterectomised women particularly those above 60 need surveillance. Hysterectomised women without risk factors have a low risk of developing vaginal cancer

O – 5

Cervical Intraepithelial Neoplasia and Cervical Cancer: A Genome-wide Association Study (GWAS) of the UK Biobank

Dr Sarah Lever, Dr Ilkka Kalliala[1,2], Dr Matthias Wielscher[1], Dr Marc Chadeau-Hyam[1], Dr James Flanagan[1], Prof Marjo-Riitta Jarvelin[1], Dr Maria Kyrgiou[1]

[1]Imperial College London, London, United Kingdom, [2]University of Helsinki, Finland

Introduction / Background

Persistent infection with high-risk human papillomavirus (HPV) is causally associated with cervical cancer. However, only ~1% of women with HPV infection progress to cervical neoplasia (CIN). It is estimated that heritability may explain 25-30% of total variation in liability for cervical cancer. Common genetic variants have been detected in HLA (Human Leukocyte Antigen) regions responsible for the immune response, but this is not well understood. We conducted a genome-wide association study to identify underlying genetic risk variants which might predispose to CIN and cervical cancer.

Aims / Methodology

We aimed to conduct the largest genome-wide association study (GWAS) of cervical cancer to date, using UK Biobank data to identify genetic polymorphisms associated with CIN and cervical cancer. Using phenotypic data available from linked UK cancer registries, hospital ICD-10 records, operative procedures and participant interviews we identified 6378 women with CIN3/cervical cancer and 198,441 controls without a history of any cytological abnormalities. With UK Biobank genotyping calls (Affymetrix UK Biobank Axiom® array) we conducted genome wide analyses for cervical cancer, adjusting for population structure and potential confounders. As a stringent correction for multiple testing, we considered a pre-test significance level of 10^{-8} to declare single nucleotide polymorphisms (SNPs).

Results

In the first UK Biobank iteration we have identified potential SNPs ($p<5x10E-8$) associated with CIN3/cervical cancer, with a large number of significant loci residing within Chromosomes 2 and 6. Independent loci in the Major Histocompatibility Complex (MHC) region at 6p21.3 were associated with CIN3/cervical cancer, including loci adjacent to the MHC class 1 polypeptide-related sequence A gene (MICA) and HLA-DRB1, which replicates previously reported associations from published GWAS.

Conclusions

We observed genetic variants significantly associated with CIN3/cervical cancer in both cohorts. Loci within the MHC may affect susceptibility to development of CIN3/cervical cancer through altered immune responses. We will next undertake fine-mapping within the UK Biobank cohort, to further classify any novel causal variants that may explain the estimated genetic susceptibility to cervical cancer.

O – 6

Primary Cervical Screening with High-risk Human Papillomavirus Testing: Evaluation of the English Screening Pilot

Professor John Tidy, Dr Matejka Rebolj[2], Dr Karin Denton[3], Professor Henry Kitchener[4]

[1]Sheffield Teaching Hospitals Nhs Foundation Trust, Sheffield, United Kingdom, [2]Kings College London, London, United Kingdom, [3]North Bristol NHS Trust, Bristol, United Kingdom, [4]University of Manchester, Manchester, United Kingdom

Introduction / Background

To report prevalence and incidence rounds of a large pilot of routine primary hrHPV testing, in comparison with primary liquid-based cytology (LBC) screening at six screening laboratories within the English Screening Programme.

Aims / Methodology

Screening with hrHPV testing and LBC triage including two early recalls for hrHPV positive/cytology negative women. Assessment of referral to colposcopy; adherence to early recall; detection of high-grade cervical intraepithelial neoplasia (CIN2+) of HR-HPV testing compared with LBC in two consecutive screening rounds.

Results

578,547 women underwent cervical screening in primary care between May 2013 and December 2014, with follow-up until May 2017; 183,970 (32%) were screened with HR-HPV testing.
Baseline HR-HPV testing and early recall required approximately 80% more colposcopies over two years, ORadj: 1.77 (1.73 to 1.82), but detected substantially more CIN than LBC: ORadj for CIN2+ 1.49 (95% CI: 1.43 to 1.55), for CIN3+ 1.44 (95% CI: 1.36 to 1.51) and for cervical cancer 1.27 (95% CI: 0.99 to 1.63). Attendance at early recall and colposcopy referral was 80% and 95%, respectively. Early recall contributed 25% of CIN2+ detected in the prevalent round. At the incidence screen, 33,506 women screened with HR-HPV testing had substantially less CIN3+ than 77,017 women screened with LBC: ORadj 0.14 (95% CI: 0.09 to 0.23).

Primary screening for HR-HPV is more sensitivity when compared to primary cytology. There is in increase in referral to colposcopy, the main contribution to this is form investigation for women with persistent HR-HPV infection. The screening interval for women who are HR-HPV negative can be extended

In England, primary HR-HPV screening increased the detection of CIN3+ and cervical cancer by approximately 40 and 30%, respectively, compared to LBC. The changes to screening were practicable. The very low incidence of CIN3+ after three years supports an extension of the screening interval.

O – 7
Screening Performance of the HPV Primary Early Adopters Phase in Wales

Dr Louise Pickford, Helen Clayton

Public Health Wales, Cardiff, United Kingdom

Introduction / Background
In preparation for the full rollout of HPV primary screening in Wales by 1st October 2018, Cervical Screening Wales converted 20% of cytology workload to HPV primary screening on 1st April 2017. This 'early adopters' phase was evaluated to inform full rollout.

Aims / Methodology
A statistical evaluation of the period 1st April to 31st December 2017 was undertaken.
We comment on key findings around: -
• HPV positivity rates
• Abnormal reporting rates
• Referral rates to colposcopy
• Detection of CIN 2+
• PPV of high grade cytology for CIN 2+

Results
99,585 cervical screening samples were processed during the evaluation period, of which 18,058 (18.1%) underwent HPV primary screening. The HPV positivity rate during the evaluation phase was 12.2%. HPV positivity rates fell with age, apart from women over 65.

In the HPV primary screened group, 40.8% of positive HPV results were reported as cytologically abnormal. Of these 70.2% were low grade and 29.8% high grade. Abnormal reporting rates were highest at the beginning of the evaluation period, decreasing steadily throughout.

6.9% of women who were HPV primary screened had an HPV positive cytology negative result, requiring repeat testing after 12 months. For every 1000 women screened, HPV primary testing detected 16.9 cases of CIN 2+ and 10.2 cases of CIN 3+. Cytology primary screening detected 14.6 cases of CIN 2+ and 9.4 cases of CIN 3+. The differences of detection rates between screening methods were not statistically significant during the evaluation period.

PPV of high grade cytology for CIN 2+ was 76.3% for HPV primary screening and 73.2% for primary cytology screening. Knowledge of HPV positive status may bias cytology reporting, but this appears to improve over time. Understanding this may help future services converting to HPV primary screening. The performance of HPV primary screening in Wales was comparable to the English sentinel sites. This has helped future planning in the cervical screening programme, including predicting the possible impact on colposcopy services. Although there was an increase in detection of CIN 2 and CIN 3 per 1000 women screened, this was not statistically significant during our evaluation period

O – 8
Prospective Audit of Conservative Management of CIN2

Miss Anni Innamaa, Mr Jonathan Lippiatt, Mr Ioannis Biliatis, Miss Louise Melson

Poole Hospital NHS Foundation Trust, Poole, United Kingdom

O – 9

Conservative Management of stage IA Cervical Cancer: Outcomes Following Loop Excision as a Fertility Sparing Policy with Critical Emphasis on Margin Status

Mr Porfyrios Korompelis, Mr Stuart Rundle, Ms Meera Adishesh, Ms Rachel O'Donnell, Mr Raj Naik

NGOC, Gateshead, United Kingdom

Introduction / Background

Controversies in stage IA cervical cancer include 1) need for radical treatment in IA2 disease, 2) lymphadenectomy in LVSI positive cases, 3) reflex hysterectomy as primary treatment or delayed hysterectomy after fertility completion. These controversies are highlighted by a trend towards conservative treatment consisting solely of loop excision.
We present the largest published series of a conservative treatment policy in stage IA cervical cancer.

Aims / Methodology

A cross-referenced analysis utilising national and organisational databases was performed ensuring capture of all stage IA cervical cancers within a defined geographical area of the North of England over a 10year period (2006-16), population 1.6million women. The study objectives were to determine 1) regional incidence, 2) recurrence rate invasive disease, 3) recurrence rate CIN, and 4) reflex and delayed hysterectomy rates.

Results

Diagnosis: 247 stage 1A cases were identified, 232(94%) 1A1 and 15(6%) IA2 (incidence 15/100,000 women). 89% squamous histology, 5% LVSI positive, 4 occult cases at hysterectomy, remaining 243 loop diagnoses, 22% complete excision of invasive disease & CIN at first loop (11% incomplete excision invasive, 67% incomplete excision CIN).

Treatment: 20% underwent one loop, 53% two loops and 1 patient 3 loops; 27% had hysterectomy. 7% underwent bilateral pelvic lymphadenectomy (0/17 positive nodes).

Outcomes

Recurrence rate for invasive disease was 2/247(0.8%) with no deaths (median follow-up 46mths), CIN recurrence was 8/247(3%). Delayed hysterectomy rate was 13/177(7%). Both invasive recurrences were in stage IA1, LVSI negative cases. Case1: hysterectomy with CIN3 at the vaginal margin. Case2: loop treatment with CIN3 at the ectocervical margin. The difference in recurrence rates following hysterectomy (1.4%) or loop excision (0.6%) was non-significant (p=0.85).

Conclusions

Recurrent invasive disease following a conservative treatment policy is <1%. Irrespective of loop excision/hysterectomy treatment, margin status defines the risk of recurrence, clear margins=0% (0/230), CIN incompletely excised=12% (2/17), CIN3 incompletely excised=33% (2/6)[$p<0.05$].

O – 10

Comparison of 3 Colposcopy Training Simulator for Effective Training in Cervical Cancer Prevention

Dr Ida Ismail-pratt, Miss Jieying Mandi Lee[2], Mr Wai Tung Eason Chow[2], Mr Sui Ming Raymond Hong[2], Dr Soon Yau Joseph Ng[1], Associate Professor Jen Hui Jeffrey Low[1], Associate professor Arunachalam Ilancheran[1], Professor Ching-Chiuan Yen[2]

[1]National University Hospital (NUH), Singapore, Singapore, [2]National University Singapore (NUS), Singapore, Singapore

Introduction / Background

Cervical cancer is preventable but remains one of the leading causes of death in women worldwide. Pre-cancer cells can be identified and successfully treated avoiding future cancerous progression. Training should not only focus on acquiring procedural skills but ensuring good clinical outcome i.e. complete removal of disease with minimal risk to women. Training in colposcopy treatment must have these two goals in mind. Current available colposcopy simulators focus mainly on acquiring skills without providing objective measures of good clinical outcome. We designed a colposcopy simulator that exposes the operator to a simulated environment that allows for achievement of both outcome goals. The new colposcopy simulator was compared to two other published simulator**.**

Aims / Methodology

This is a randomized control clinical trial designed to study outcomes of LLETZ training using three simulators. Main outcomes measured were skill acquisition (OSATS) and ability to produce an optimal LLETZ specimen. The study participants are Group 1: Year 5 medical students who have completed their obstetrics & gynaecology attachment but no experience in LLETZ and Group 2: Experienced practitioners who have completed at least 2 LLETZ with or without direct supervision on patients.The randomisation was performed using 3 x 3 Latin Square design. Study participants were allocated equally to the three models, Plastic cup model (Hefler's et.al); Toilet roll model (Reeve's et.al.); New design model. Each session was conducted in an identical manner except for the order of interventions. Statistical analysis were done using SPSS, version 20 and Repeated Measures Two-Way ANOVA (Analysis of Variance). An outcome was considered statistically significance if $P < 0.05$.

Results

There was no significant difference in skill acquisition for novice group between the three simulators (OSATS scores, $P > 0.05$). In terms of acquiring free margin for specimen, there are significant difference between experienced practitioners and novice ($P<0.01$), and between the models ($P<0.01$) for both groups.

Novices have a significantly shallower cut with all models and fail to remove the entire lesion to meet the standard of at least 0.7 mm depth. With the new colposcopy simulator however, novices performed significantly better and the specimen is comparable to specimen produced by the experienced participants when they are using the toilet roll model.

Training in colposcopy treatment such as LLETZ should emphasise more on ability to ensure complete removal of disease while exposing to every woman to the minimum of risks. The new colposcopy simulator design can aid in acquiring this goal compared to currently available simulators in the market. The newly designed simulator shows the ability to provide training in skill acquisition while ensuring effective treatment is compared to plastic cup or toilet roll simulator

Poster Abstracts

P – 1
Depth of Excision at LLETZ

Miss Rosamund Sawyer

Leighton Hospital, Nantwich, United Kingdom

Introduction / Background
The Colposcopy and Programme Management Guidelines for the NHS Cervical Screening Programme (3rd ed. NHSCSP Publication No 20 March 2016) state that “excisional techniques [for the treatment of CIN] should remove tissue to a depth of greater than 7 mm in 95% of cases”

A previous audit carried out in our unit on the management of high grade cytology suggested that we only reached this target in 75% of cases, and when we looked at the results of the pilot SQAS standards for colposcopists’ individual performance data (2017-2018) they revealed that none of us were anywhere near this target.

Aims / Methodology
This audit was designed to review the depth of excision in women who have had a LLETZ treatment and benchmark the local management against national guidelines, and then look at outcome/follow up data for women who have had LLETZ treatment and investigate whether there is a difference in the rates of recurrent CIN related to the depth of excision.

Results
Our results showed that our LLETZ specimens were only greater than 7mm in depth in 67% of cases. However, the results showed that 100% of LLETZs had complete excision of CIN at the endocervical margin, and after 5 years follow up there were no women who had recurrent abnormal cytology or CIN. The audit includes a discussion of why the figure of "greater than 7mm" has been identified as a minimum recommended depth of excision.

P – 2
Evaluation of Sample Taker Training for HPV Primary Early Adopters Phase in Wales

Dr Louise Pickford, Helen Clayton

Public Health Wales, Cardiff, United Kingdom

Introduction / Background
In preparation for full rollout of HPV primary screening in Wales by 1st October 2018, Cervical Screening Wales (CSW) converted 20% of cytology workload to HPV primary screening in April 2017. This involved a large training exercise for sample takers. The CSW Nursing Team undertook a 'train the trainers' session with the CSW Clinical Lead, to develop a training presentation for use with sample takers, and to equip the CSW nurses with the background knowledge to answer any questions raised. A factsheet for sample takers was developed.
Training was provided to all sample takers, either face-to-face or cascade training. Some sample takers accessed online training**.**

Aims / Methodology
An evaluation of training was undertaken in January 2018.
72 General practices across Wales formed the 'Early Adopter' phase.
126 sample takers completed an online questionnaire six months after converting to HPV primary screening about training received, and confidence in discussing HPV and HPV primary screening with women.
CSW nurses also met in a facilitated session to discuss what went well during the training and what could be improved.

Results
92% of all respondents reported training as good to excellent. This increased to 99% in the face-to-face training group.
Confidence in discussing HPV and HPV Primary Screening was highest in the face-to-face training group. Suggestions for improvement included: -
• Online learning module
• Follow-up training
• Longer sessions due to a lot of information
• A section on how to respond to women's questions
Suggestions and responses have informed the sample taker training for full rollout of primary screening, which took place by 1st October 2018.
Sample takers were encouraged to attend sessions organised by CSW.
An audio-described presentation was made available on the NHS Wales Intranet.
Face-to-face training increases sample takers' understanding of HPV and confidence in explaining HPV and HPV testing. Where possible this should be the training method of choice.

P – 3
Evaluation of the Service User Experience for HPV Primary Early Adopters Phase in Wales

Dr Louise Pickford, Helen Clayton

Public Health Wales, Cardiff, United Kingdom

Introduction / Background
In preparation for the full rollout of HPV primary screening in Wales by 1st October 2018, Cervical Screening Wales converted 20% of cytology workload to HPV primary screening in April 2017. This involved providing additional information for service users.
As part of the evaluation, service users were asked about their understanding of HPV and HPV primary screening from the information they were sent and the discussion with their sample taker.
The results of the evaluation were to be used in the full rollout of HPV primary screening

Aims / Methodology
Two groups of service users were asked to rate their understanding of the additional leaflet, HPV testing, result letter (where appropriate) and the sample taker explanation of HPV and HPV testing. These two groups were:
• Service users attending for a screening test (732 responses)
• Service users receiving their screening result (183 responses)
Paper questionnaires, an online questionnaire and a telephone questionnaire were options made available to service users.
Service users were also asked for comments on any part of the process. Comments received were grouped into themes, and further actions identified from these.

Results
The main themes identified were: -
• Lack of confidence/understanding of HPV primary screening e.g. concerns about not having cytology if HPV not detected
• Sample taker compliments
• Suggestions for improvement e.g. information, terms used, making results clearer
• Positive comment to service
• Not receiving information
• Negative comment to service
• General lack of understanding of screening
Whilst the information was praised, understanding was increased by explanation from the sample taker, showing the importance of good sample taker training.
The information leaflet being developed by CSW to accompany screening invitations was amended due to suggestions and comments made by service users. This now stresses the reliability of a negative HPV result. Similar comments have been used to develop new results letters. Service users involvement can identify issues which had not been anticipated. Involving service users in a 'pilot' phase allows public information to be 'tailored' before full rollou

P – 4
Audit of Adherence to HPV Triage and Test of Cure (TOC) Protocols

Dr Padma Eedarapalli, Dr Megan Woodrow

Royal Bournemouth and Christchurch Hospitals NHS Foundation Trust, Bournemouth, United Kingdom

Introduction / Background
Persistent HPV infection causes cervical cancer. High Risk HPV test in cervical screening has been trialled in pilot/sentinel sites in UK& other trials such as Artistic and TOMBOLA. Positive Predictive Value (PPV) of the test is better than cytology alone. A negative HR HPV test is more significant than normal cytology. To speed up referral to colposcopy to those need it, HPV triage was introduced nationally in the UK in 2012 along with TOC for women with treated CIN. CGIN was included in TOC in 2014.

Aims / Methodology
We conducted a retrospective audit of compliance with this national protocol in our clinic. Aims were to assess the individual colposcopist level compliance, deviations and evidence of MDT discussion in complex cases. Data from April 2017- Sept 2017, was analysed with the help of electronic records.

Results
Total HPV triage patients were 78. All 4 colposcopists biopsied 100% of HPV triage cases(n=39) where high or low grade CIN was suspected. In 10, management plans deviated from the protocol, there was a clear explanation in 9. Biopsy rates where colposcopic impression was normal or HPV related inflammation, varied from 25-100%. There were 5 TOC patients, in 4 of whom the protocol was followed correctly. The only deviation was explicable. Difficult cases were discussed in MDT.
Conclusions: There was excellent adherence to the HPV triage and TOC protocols down to the individual colposcopist level with all CIN being biopsied. However, a large number of women were biopsied despite a normal colposcopic opinion. The clear protocols enabled our unit to provide standardised management, allowing us to discharge women appropriately.
Recommendations: We have recommended that there was no necessity to take biopsies in the absence of atypical squamous epithelium. We will monitor the biopsy rates in this subgroup whilst encouraging multidisciplinary approach to complex patients.

P – 5
The Management of CIN 2 in Women of Reproductive Age at Royal Bournemouth Hospital

Dr Victoria Pereira, Dr Padma Eedarapalli

Royal Bournemouth Hospital, Bournemouth, United Kingdom

Introduction / Background
Cervical excisions exceeding 10mm in depth are associated with increased risk of mid-trimester miscarriage and pre-term birth. However, it is essential to balance this against the risk of disease progression. Use of HPV biomarkers can guide the management of patients with high-grade CIN.

Aims / Methodology
A retrospective audit was conducted comparing local practice to recommendations made at the 2016 symposium; Risk of preterm birth following surgical treatment for cervical disease, P Saseini et al, which was summarised to form a local guideline. The inclusion criterion was women with histological diagnosis of CIN 2 between July and December 2017. Data was obtained from electronic patient records and analysed using Microsoft Excel.

The primary standard was p16 staining of all histology showing CIN 2. Secondary targets included; standardisation of histology reporting, MDT discussion regarding women with p16 negative CIN 2, patients undergoing cold coagulation should have a histological diagnosis confirmed, clear documentation of parity and discussion regarding obstetric implications for patients undergoing Lletz.

Results
Of the 47 patients, 41 had staining for p16. 98% of these stained positive. Of those with positive p16 staining; 24 patients underwent cold coagulation. 19 underwent Lletz. All patients undergoing cold coagulation had a histological diagnosis confirmed.
Of 19 patients undergoing Lletz, 13 had an excision depth greater than 10mm. Only 2 patients had excisions greater than 15mm. Parity was documented in only 20 cases. Only 2 women received documented information regarding obstetric implications of Lletz treatment.
In this sample all women were treated as the majority of histology stained positive for p16. With wide-spread application of p16 staining, those patients with CIN 2 and negative p16 staining may be considered for conservative management, reducing future obstetric morbidity.
Improvement is needed in documenting women's wishes regarding future pregnancy and providing balanced information about obstetric morbidity.

P – 6

The Outcome of Women Referred through the Acute Oncology Service to Colposcopy at Lewisham Hospital with PCB or IMB in 2017.

Mr Dan Zamblera, Ms Saran Sylla, Ms Ola Folayan

Lewisham and Greenwich NHS Trust, London, United Kingdom

Introduction / Background

An indication for urgent referral through a 2 WW clinic according LCA Gynaecology Oncology guidelines 2015 includes patients with persistent inter-menstrual or post-coital bleeding and negative pelvic examination. These patients were initially seen in the acute oncology pathway and referred for colposcopy where appropriate.

Aims / Methodology

The aim of this audit is to explore the outcome of patients from the 2 week wait/ Acute Gynae-Oncology pathway with PCB/abnormal vaginal bleeding who were referred for colposcopic examination at Lewisham Hospital.

A retrospective audit analysing data from the 2WW clinic and colposcopy clinics for the year 2017 was under taken. Clinical findings from both clinics and investigations such as USS, infection screen, cervical cytology and histology from cervical biopsies were examined.

Results

From the database117 patients were seen in the acute gynae oncology clinic in the year 2017 with PCB/IMB. From this group 71 patients (61%) were referred to the colposcopy clinics.

After examination 38 had cervical biopsies.

The histology results from the biopsies showed 2 patients had CIN2, 14 had CIN 1, 15 had inflammation or koliocytoisis only, 2 normal and 5 had polyps.

A large number of women are referred through a 2ww cancer pathway for PCB/IMB. The outcome for our patients in 2017 showed that only a few patients actually had significant pathology. We feel that there must be a better pathway that avoids the stress and anxiety of being referred through a cancer clinic This would involve immediate access to gynaecology and colposcopy.

P – 7

A Retrospective Observational Study of Benchmarking Data used in the Quality Assurance of Colposcopy in Scotland

Miss Alice McGee

University of Aberdeen, Aberdeen, United Kingdom

P – 8

Management of Low Grade and Borderline Nuclear Abnormality in Squamous Smears in a Large Scottish NHS Board.

Dr Rajive Paul Joy Chiriyankandath, Dr Kathryn Knight

Royal Infirmary of Edinburgh, NHS Lothian, Edinburgh, United Kingdom

Introduction / Background

In 2016, the Scottish Cervical Screening Programme (CSP) introduced a standardised algorithm to manage LG/ BNA smears. This aims to reduce the risk of aggressive management and its associated implications to the patient.

These patients are required to have a colposcopic assessment. If normal or having only low grade changes or confirmed CIN 1 or less, a further smear is repeated in 12 months in the community. At this stage, a high grade (HG) smear gets referred back to colposcopy. A negative or LG/BNA result follows a conservative course of management involving repeat smears done annually. A patient goes back to routine recall after having 2 consecutive negative smear results. If however a result reverts back to LG/BNA they are referred to colposcopy to consider treatment.

Aims / Methodology

The referred cases to NHS Lothian were identified through the Cytology services. Patient records were then reviewed. 85 patients were identified over a 3 month period in 2017. Their management was audited against the SCSP protocol for a further year. Anonymised data was collated and analysed on Microsoft Excel. The following standards were audited for 100% compliance: all LG/BNA smears referred to colposcopy, repeat smear in 12 months if CIN1(or less) and further 12month smear if next smear negative/LG/BNA.

Results

All patients identified by the cytology services were referred for colposcopy. 96.5% of patients attended colposcopy. 85% had a normal assessment. 15% had a directed cervical punch biopsy due to clinical suspicion confirming CIN2.

37% were offered the recommended 12 month repeat smear.49% were offered an earlier smear in 6 months. The majority had no documented indication. 4 patients in this group were anxious about their risk of possibly developing cancer and requested a LETZ. This local deviation in practice may be causing harm

P – 9

Low Grade Cytology and High-risk HPV: An Audit of Patient Management Following Introduction of HPV Triage

Dr Lyndsay Creswell, Dr Karen McKinney

Daisy Hill Hospital, Southern Trust, Newry, United Kingdom

Introduction / Background

The HPV triage and test of cure protocol was introduced in Northern Ireland in 2013 to reflect the known association between high risk HPV (HR-HPV) and cervical cancer. All women who are HR-HPV positive with low grade cytological abnormalities should be seen at colposcopy within 2 months. Punch biopsies from a normal transformation zone are not indicated for low grade referrals. A low grade lesion should be followed up at 12 months by repeat cytology. If the lesion has not resolved within 2 years, a biopsy is warranted. This audit assessed our compliance with NHSCSP standards.

Aims / Methodology

We included 82 women aged 25-64, enrolled in the NHS cervical screening programme, with low grade cytology or less and HRHPV. All women who had a previous LLETZ procedure were excluded.

Results

75.6% of patients were reviewed within 2 months of initial referral. 86.6% of women underwent a punch biopsy at first colposcopy review; this includes 12 women who had normal colposcopy documented. 19 women (27%) referred with low grade cytology had CIN 2 or greater following colposcopy assessment and biopsy. They were treated and excluded from subsequent analysis. The remaining 63 patients had follow-up cytology at approximately 12 months. We noted 29% of reviews were delayed due to non-attendance and pregnancy. 52% of the women with CIN 1 were discharged following repeat cytology. The rest were reviewed at colposcopy with persistent HRHPV. 100% of women had biopsies taken if attending colposcopy >24 months.

Conclusion

Our results show we were performing many punch biopsies and hospital reviews in 2015 which do not meet the current NHSCSP guidance. We aim to reduce unnecessary punch biopsies at the first visit and liaise with GP colleagues so that follow-up can be community based which may improve patient compliance.

P – 10
LLETZ; Are we following the guidelines

Dr Ream Langhe, Dr Sasikala Selvamani, Ms Karen Clinton, Ms Marina O' Reilly, Dr Nor Azlia Abul Wahab, Dr Rosie Harrkin, Dr Etop Akpan

Louth County Hospital, Dublin, Ireland

Background
Large loop excision of the transformation zone (LLETZ) has now become the most popular method of treatment for CIN. It is a simple, fast procedure that generally only takes a few minutes and comprehensively examines histologically the excised transformation zone. The procedure usually carried out under local anaesthetics and associated with minimum complications.
Methods &materials: A retrospective review was performed for patients who underwent a loop excision procedure under local anaesthesia between January 2018 and April 2018. The following criteria were examined: referral cytology, documentation of visibility or lack of visibility of the squamo-columnar junction, removal of specimen as a single fragment, depth of excision and LLETZ related complications. All information was obtained from MediScan. This study aims to assess the quality of the LLETZ procedure in our outpatient colposcopy clinic.
The standards of the audit were:

- All women should be consented for the procedure
- More than 80% of excisions should be removed as a single fragment
- LLETZ should remove tissue to a depth of greater than 7mm on 95% of cases.
- The grade of cytological abnormality should be recorded on more than 90% of examinations

Results
59 women underwent LLETZ during this period. All patients were consented for treatment. The median age of the women was 35 years. The grade of cytological abnormality was documented in all cases. The visibility or lack of visibility of squamo-columnar junction was recorded for every patient. HSIL was the most common referral cytology (32%) followed by LSIL (31%). Punch biopsies were taken in all cases prior to treatment. Higher grade CIN were reported in smears referred with severe dyskaryosis. The proportion of excisions that were removed as a single fragment was 85%. The proportion of excisions that were to a depth of 7mm or greater was 56%. None of the women underwent the procedure had any complications. 17% of histology reports found incomplete excision at the endocervical and ectocervical margins. The number of completed excisions was higher at the endocervical margin than it was at the ectocervical.

Conclusion
This study indicates that the use of LLETZ in our unit is safe and complications free. Deeper loop excisions removed as one fragment would increase the quality of treatment. The depth of excised specimen did not meet the target, which is an area of practice that needs to be improved. A future audit is required after implementing the changes in practice.

P – 11
Audit of LLETZ Sample Reporting; are they Reported in Line with RCPath Guidelines?

Dr Lena Wilkinson

North Tyneside General Hospital Northumbria NHS Foundation Trust

Introduction / Background
Cervical punch and loop biopsies should be reported to a high standard. The RCPath detailed document Tissue pathways for gynaecological pathology (January 2015) outlines items recommended for inclusion into reports. For the reporting of LLETZ samples our department currently uses a proforma based on the RCPath guidelines in the Pathosys system. This audit cycle focused on the use of this proforma and whether it enabled reporting in line with RCPath guidelines.

Aims / Methodology
To determine compliance with RCPath guidelines for reporting of LLETZ samples and to determine improvement between audit cycles.
Retrospective audit of 100 sequential LLETZ samples, followed by re-audit of a further 100 sequential LLETZ samples in the following with communication of results to clinical consultants.

Results
Most core data items are adequately recorded. Some items (such as extension of CIN into endocervical glands) are persistently omitted, a combination of these means that 49% of reports do not achieve the target of 100% compliance with the dataset. At re-audit some improvements were detected. The percentage of compliance recording macroscopic items rose from 84 percent in 2017 to 100 percent in 2018 and recording of grades of CIN rose from 96% to 100%. Overall compliance showed no improvement (49% in 2017, 50% in 2018).

Proformas provide a good aide memoire and a means of clearly communicating important information. Audit and re-audit combined with communication of results to relevant parties can improve compliance with proformas. The use of proformas is however limited if they do not maintain simplicity, adaptability and relevance to clinical reality. Most of the identified omissions were of limited clinical importance and appear to have arisen due to a combination of complex layout and difficulties in reflecting clinical reality within the constraints of the proforma. The pathosys system is not easily edited, this therefore places a limit on its usefulness.

P – 12
Challenges with LLETZ Procedures under GA

Miss Gulnaz Majeed, Mr Farshad Tahmasbi

GSTT, London, United Kingdom

Background
NHSCSP Colposcopy and Programme Guidelines set standards for treatment for both local and general anasthetics. This audit was part of audit cycle mainly focusing on procedures under GA.

Aims and Objectives
To monitor, review and improve care provision as well as use resources appropriately at GSTT.

Methodology
A SOP developed as part of recommendations of an earlier audit LA versus GA LLETZ was used for process for undertaking LLETZ procedures under GA.

Results
There were 100 patients booked for procedures under general anaesthetics in 2017. Patients who finally had LLETZ under GA were n=88 (>20%). Indications large area n=49, vulvodynia/patient choice n=18, previous treatment, anatomical concerns n=10, poor access n=8, multifocal disease n=4.
Reasons 12 patients didn't have LLETZ procedures were due to pregnancy, moving to another part of country or overseas, private care etc. Out of 47% (n=155) who were treated within 4 weeks of biopsy obtained by colposcopy Unit to actual date treatment took place only 1.3% (n=2) were under GA. 79% of procedures were in single sample. Type 1 excision n=39, type 2 excision n=25, type 3 excision n=19, LLETZ sample were less than 7 mm in 5 patients. Communication standards of 8 weeks breached in n=5 patients.
Change in administrators influenced booking, data capture and communication standards.

Conclusion
GSTT is providing a good and safe service for patients who have LLETZ under GA. Some of the targets set by NHSCSP were not met especially 62 day pathway due to optimising suitability for GA procedures due to co-morbidities and referrals to MDT.

Recommendations
Review SOP with emphasis on clear administrative roles and supervise trainees to make sure we achieve LLETZ standard of depth of 7mm.

P – 13

Colposcopy in Pregnancy Audit. The aim of the Audit is to test the Current Practice of Performing Colposcopy Examination During Pregnancy against the BSCCP Document 20 Guidelines.

Miss Sarah Bugren, Miss Chandrima Basu

East Kent Hospitals University Foundation Trust, Ashford, United Kingdom

P – 14
An audit of LLETZ Procedures in a University Teaching Hospital

Dr Joanne Moffatt, Dr Alvin Floreskou, Mr Dimitrios Miligkos

Princess Anne Hospital University of Southampton NHS Foundation Trust, Southampton, United Kingdom

Introduction / Background
LLETZ procedures are commonly performed to treat dysplastic cervical cells. Standardising depth of LLETZ is important to confirm adequate excision and reduce risk of recurrence. Very deep excision however increases the risk of adverse obstetric outcomes.

Aims / Methodology
A retrospective analysis of colposcopy notes and histology reports for a 4 month period was undertaken. Test of cure (TOC) smear reports were obtained from the Open Exeter database. Standards were identified from the NHSCSP 2016 report.

Results
127 women underwent LLETZ in the study period. 6 were excluded as not primary LLETZ. Indication for LLETZ was moderate/severe dyskaryosis on smear (51.2%), CIN2-3 on biopsy (42.2%), suspected or confirmed CGIN (4.2%) with 2.4% for other reasons. 83.5% LLETZ procedures were performed under local anaesthetic. Histology was CIN2/3 in 83.4% cases, 4.1% showed CGIN, 5% showed carcinoma or microinvasion and 6.7% showed no CIN or CIN1. Depth of excision for type 1 SCJ was adequate (>7mm) in 65.7%. Depth of excision for type 1/2 was less than 15mm in 94.8%. 49 women were treated at first visit and 98% had CIN2/3/malignancy on histology. 45.7% had clear margins with 82.8% clear endocervical margins. 76.4% (n=84) of 110 women eligible for TOC attended (3.6% were pregnant). Overall 2.4% of these women had CIN at 12 months, 92.9% had no CIN and 4.8% did not attend colposcopy.
As a colposcopy service we are meeting the standards in terms of management under local anaesthetic and histology showing CIN2 or higher when LLETZ is performed at first visit. We are falling below the standards for depth of excision in SCJ type 1, although not exceeding the maximum depth in types 1/2. Even though there was high rate of incomplete histological margins only 2 women had evidence of CIN at 12 months. It is of major concern that 23% of patients did not attend the TOC smear which highlights the importance of adequate excision but not overtreatment. A need for improved training is necessary as well as increasing awareness to women on attending for TOC smear.

P – 15
Cervical Glandular Intraepithelial Neoplasia: survey of Current Practice

Miss Florentia Mina, Miss Eleanor Manners[2], Miss Theresa Freeman-wang[1], Miss Adeola Olaitan[2]

[1]Whittington Health, Archway, London, United Kingdom, [2]University College London Hospital, London, United Kingdom

Introduction / Background
In the management of glandular abnormalities, NHS CSP publication 20 indicates:

- Women with cytology suggesting "? Glandular neoplasia" should be offered a cylindrical shaped excision. This is based on 'good practice' rather than direct evidence.
- Excision should be 1cm above SCJ in young women(<35 years) and 2-2.5cm above SCJ in older women
- further guidelines on management depending on whether margins are positive or negative
- Follow up is "Test of cure" at 6 and 18 months.

We know that 0.05% of cytology referrals show atypical glandular cells. Of women with a glandular abnormality on cytology, 56% have evidence of precancerous or cancerous lesions on histology (44% from the endocervix and 56% from the endometrium) *(Scheiden et al, 2004).*
37% of women with a glandular abnormality will have HGCIN and/ or CGIN or cancer.
The BSCCP OSCE exam question on glandular disease is always poorly answered.

Aims / Methodology

- An Interactive survey of experienced colposcopists using 'Poll Everywhere' at RCOG Advanced Colposcopy Course.
- 66 responses

The questions covered demographics (where colposcopists were practicing, how much experience they have) and treatment (Primary management, whether this changes for women <35 or ≥35 years, secondary management (after histology results) is hysterectomy an important consideration?)

Results
Majority chose LLETZ as their primary treatment modality for a woman referred with? Glandular neoplasia (65% and 68.5% for ages <35 and ≥35 years respectively). The BSCCP suggests a cylindrical excisional biopsy (type 3 excision) would be better suited than LLETZ.
There is variation in what colposcopists accept as a minimal excision margin for a woman with CGIN (for both ages <35 and ≥35)
1 in 3 colposcopists is unsure of the proportion of patients in their practice who require a second treatment to achieve clear margins

P – 16
CIN 2: Surveillance Versus Treatment – A Local Audit

Miss Tamara Howe, Mrs Diane Richardson, Mr Sahathevan Sathiyathasan

Princess Royal University Hospital, Kent, United Kingdom

Introduction / Background
CIN 2 regression rates are 40%. Higher regression rates (60-70%) are seen in younger patients. Current guidance for patients with confirmed CIN2 is excisional biopsy. However, surveillance of this equivocal histological diagnosis is becoming more common.

Aims / Methodology
A retrospective audit of 12 patients undergoing expectant management of CIN2 was undertaken in a local colposcopy unit. The aim was to identify safe and appropriate management pathways of such patients. This would enable us to learn how best to tailor future patient care.

Results
457 punch biopsies demonstrating CIN2 were undertaken over a three year period (1/4/2015-31/3/2018). 12 of these patients were identified on our computer database as 'expectant management'. Referral smears included borderline – 1, mild – 8, moderate – 2, severe – 1. 3 patients were less than 25 years old, with the rest being under 35. None were smokers with one being an ex-smoker. 8/12 were nulliparous with 4/12 being a para 1.
3/12 patients had a six month colposcopy and repeat punch biopsy demonstrating CIN 2. Of these 3 patients, one moved from the area, the other two had LLETZ with CIN2/3. 4/12 reverted back to normal smears over two years. 2/12 reverted to CIN1 and they are still under follow up. 3 patients were lost to follow-up.

Discussion
This audit demonstrates a 50% regression rate for this patient cohort. Smoking is a known risk factor for CIN progression, this may go some way to explaining why no patients were smokers, as colposcopists are likely to take this into consideration during patient selection.

Conclusion
The implications of cervical treatment on women's reproductive morbidity means personalising patient care is now part of the colposcopy journey. Expectant management of select patients should be considered with multidisciplinary involvement.

P – 17

Follow up of Treated Cervical Glandular Intra-epithelial Neoplasia (CGIN) after Introduction of Test of Cure (TOC)

Dr Ahmad Mohamed, Victoria Romanova, Dinah Deslandes, Rachel Dixon, Mr Adam N Rosenthal

Buckinghamshire NHS Trust, Aylesbury, United Kingdom

Introduction / Background

In 2014, the NHS Cervical Screening Program introduced a Test of Cure (TOC) protocol, including for women treated for cervical glandular intra-epithelial neoplasia (CGIN), although the latter lacks a strong evidence-base.

Aims / Methodology

Aim is to assess compliance with TOC and to document outcome following CGIN treatment.
All CGIN patients treated from July 2014 (date TOC introduced) - July 2017 at University College London Hospitals. Data were collected retrospectively from electronic records, Compuscope, Open Exeter, and entered onto an Excel spreadsheet.

Results

- 13 CGIN cases, median age 31 yr (range 25-42), median f/u 23 months (range 6-44)
- 5/13 (38%) CGIN was incidental diagnosis
- All 13 had complete excision (med depth 22mm, range 6-33). 4x LLETZ, 8x cone, 1 hysterectomy. 1/13 (8%) had further excision for repeatedly LG but HPV-neg TOC
- 11 of 13 (85%) had >=1 TOC. Remainder; 1 hysterectomy with clear margins, 1 private follow-up
- 1st TOC - 7/11 (64%) neg/neg. Following this, 1 failed to re-attend and 1 discharged after single neg/neg TOC
- 2nd TOC - 9/9 (100%) <24 months and 2/9 (22%) discharged as 2x neg/neg
- Another 3 discharged after 3rd TOC, and 1 after 4th TOC, as 2x consecutive neg/neg
- 3 still under follow-up; awaiting 2x consec neg/neg
- 6/11 (55%) women had been discharged with 2x consec neg/neg after median 3 visits (range 2-4) over 22.5 months (range 13-37)

Conclusions

- Significant minority of CGIN cases were incidental findings
- Suboptimal compliance with recommended TOC visit schedules
- Overall treatment outcomes satisfactory with majority correctly discharged < 2yr

Recommendations

- Colposcopy units and Cytology labs should keep auditable registers of CGIN cases (Will lab know to check for endocervical cells on TOC?)
- Longer follow-up of large CGIN cohort needed to confirm success of TOC

P – 18

A Clinical Audit of 100 Women who Underwent Colposcopy in Mafraq Hospital, 2015-2017

Dr Shahad Mahmoud Hussein Mahmoud

Mafraq Hospital, Abu Dhabi, United Arab Emirates

Introduction / Background

This audit was carried out with reference to the Colposcopy and Programme Management NHSCSP Publication number 20, March 2016.
The audit included 100 women who underwent colposcopy from 1st January, 2015 to 31st December, 2017, to compare our colposcopy practice with NHS standards, and identify which of the facets are lacking and how changes can be made for the betterment, in the view of re-auditing.

Aims / Methodology

Aims: To compare standards in reference to: documentation, practice and treatment aspects in high grade lesions.
1. Documentation standards: reason for referral, grade of cytology abnormality and adequate or inadequate examination.
2. Practice standards: excisional biopsy for high grade cervical lesions, suitability for histopathology, colposcopic assessment performed prior to treatment, recorded treatment, and treatment with proper equipment in a suitable environment.
3. Treatment measures: treatment timely received within four or eight weeks following colposcopic assessment.
The data was collected and analysed from electronic patients' files, and compared to the selected standards by using the percentage (%).

Results

Comparing documentation to selected standards; the reason for referral and grade of cytological abnormality were documented in all records, 100% meeting the criteria. The colposcopic examination was found adequate in 63% of cases, less by 37%.
With regards to our practice measures; excisional biopsy was carried out in 90.9% of women with high grade lesions, 4.1% below the standard criteria. 96% of the biopsies were suitable for histopathological study, 6% above the standard. All women needing treatment were informed and their consent was recorded. All women had colposcopic examination before starting treatment. All treatments were recorded. All these parameters were 100% met.
Timely treatment; women having definitive treatment of high grade lesions within four and eight weeks of colposcopy clinics were 43.6% and 63.6% respectively, falling short of the acceptable criteria by 46.4% and 36.4%.

P – 19

Re-auditing the Quality of Clinical Information Supplied with Cervical Biopsy Specimens at Northumbria Healthcare NHS Foundation Trust

Dr Sophie Patrick, Dr Lena Wilkinson, Mr Jonathan Brady, Mr Tony Sproston

Newcastle Hospitals NHS Foundation Trust, Newcastle, United Kingdom

Background and Aim

It is essential that robust crucial clinical information is provided on histopathology request forms accompanying samples from colposcopy. This ensures accurate reporting and high-quality results for the patient and safety. Following a previous audit (01/07/2016) which was highlighted to SQAS, it was recommended that more robust clinical information should be provided by those completing histopathology forms. In order to achieve this the audit results were presented and shared amongst the department and highlighted to the colposcopy leads.
We conducted a re-audit of samples provided between 01/01/17 and 31/01/17 with the aim to assess whether there had been an improvement in the quality clinical information supplied alongside specimens, following improvement measures.

Method

Histology request forms supplied between 01/01/17 and 31/01/17 were identified by searching the trust's electronic system for samples processed under the code T3800 (cervical biopsies). The percentage of histology forms that provided the required clinical information (as per the criteria advised by the Royal College of Pathologists) was calculated and compared with the previous audit to complete the audit cycle.

Results

115 cervical biopsies were received (149 in previous audit). 39 were loop biopsies (43) and 76 punch biopsies (106). Patient identification details were provided on 100% of forms (100 %). Provision of cervical screening history improved to 90% (86%). Provision of clinical appearance and clinical impression also improved (75% and 49% vs. 73% and 15% respectively).

Conclusion

This re-audit shows improvement in recording clinical details on request forms, with a significant improvement in the provision of clinical impression. More robust clinical information aids the pathologist in the prompt analysis of biopsies and quickens release of results to the patient. Further education is continuing to improve performance by audit presentations and business meetings.

P – 20

Moderate Dyskaryosis Cytology Referrals: A Feasibility Study on the Role of DSI Colposcopy in Facilitating Decision-making.

Dr Christina Founta, Dr Ellen Nelissen, Dr Eleanor Dynes, Mr David Milliken, Dr Emmanouil Papagiannakis

Taunton and Somerset NHS Foundation Trust, Taunton, United Kingdom

Introduction

Most UK colposcopy units follow a “see and treat” policy for high-grade (HG) cytology referrals if colposcopic impression confirms HG. This cost-effective practice also reduces patient anxiety. However, there is an underlying risk of overtreatment, especially for moderate dyskaryosis cytology referrals for which the incidence of HG histology is reported to be 75%.

Aims

To investigate the role for Dynamic Spectral Imaging (DSI) colposcopy in facilitating the optimization of initial assessment/management for this patient group.

Methods

All women referred with moderate dyskaryosis cytology who had DSI colposcopy from 12/2015 to 1/2019 were included and their results were analyzed.

Results

A total of 24 women were included. Of those, the decision for excisional treatment (Large Loop Excision of the Transformation Zone – LLETZ) was made/performed on the day for 10(42%) (group A) whilst 14(58%) underwent directed biopsies on the first instance (group B). In group A, the DSI map predicted HG disease in 8/10 and the combined colposcopic and DSI impression was HG for all 10. LLETZ histology was HG for 9/10. For the woman with <HG histology, the DSI map prediction had been normal. In group B, histology of punch biopsies was <HG for 3/14 and HG for 11/14. Of these 11, 1 patient was managed conservatively, 2 had LLETZ showing <HG disease and 8 had LLETZ showing HG. The 3 patients with <HG biopsies, were either downgraded on cytology review or managed conservatively.

Implications

There is scope for further research in this area as there is potential value in optimizing management.

Conclusions

The authors are looking into a multi-centre UK study to collect more data and explore how to optimize management for this group of patients, minimizing negative impact and maximizing cost-effectiveness

P – 21

Assessing the Incidence of Non-correlation between Cytology and Histology and its Impact on Colposcopy Workload

Dr Nidhi Shandil Singh, Dr Piyal Perera

Milton Keynes University Hospital, Milton Keynes, United Kingdom

Aim

The aim of this study was to assess the degree of non-correlation between cytology and histology and the impact this had on the clinical and administrative colposcopy work load.

Methods

Retrospective data collected by compiling all the colposcopy multidisciplinary (MDT) team meetings minutes from November 2013 to December 2018. Colposcopy MDT meetings are held monthly in our hospital. We collected a total of 99 cases during this study period.

Results

9 % (9) of the total population had a borderline cervical smear, 15% (15) low grade dyskaryosis (mild), 50% (50) had high grade dyskaryosis (severe), 9% (9) high grade dyskaryosis (moderate), 7% (7) had glandular cervical abnormalities, 4 (4%) had an unsatisfactory cervical smear and 5% (5) were referred because of other reasons like post-coital bleeding, having had a recent normal cervical smear.

In the borderline dyskaryosis group, 56% (5) had a histologically higher grade abnormality (CIN2/3) and 11% (1) had (CGIN), colposcopy correlated 100% with the smear result.

Low grade (mild) group- 20% (3) had a histologically higher grade abnormality (CIN3), and colposcopy was non-correlating with cervical smear in 6.6% (1)

High grade(moderate) group- 33% (3) had normal histology and 22%(2) had normal colposcopy, 22% (2) had a colposcopic impression of an ectropion therefore were non-correlating.

High Grade (severe)-34% (17) had a normal colposcopy, 2%(1) had a colposcopic impression of ectropion, 28%(14) had a colposcopically low grade lesion, histologically 58% (29) had a normal results or a low grade abnormality

There was a 100% correlation histologically with cervical smears showing glandular abnormalities. 33% (20) showed adenocarcinoma on histology.

Others- 20% (1) was found to have high grade CIN colposcopically and histologically and 20% (1) had CGIN on histology.

Conclusions

53% (50) patients were discharged back to the GP, however 47% patients needed a colposcopy follow-up for repeat colposcopies/biopsies, thereby significantly increasing the clinical and administrative colposcopy work load. As a result of this audit, the cytology department are now sending all their difficult to report smears for a second cytological opinion. We plan to re-audit this again in one year

P – 22

Cervical Cytology Screening History in Women Diagnosed with Cervical Cancer at Cancer Unit

Miss Rekha Wuntakal, Miss Sofia Makrydima, Jane Rains, Miss Deepali Bhatte

Queen's Hospital, Romford, United Kingdom

Introduction/ Background

Various meta-analyses have addressed the low sensitivity of smear test in detecting high grade precancerous and cancerous lesions. The imminent introduction of high risk human papillomavirus test in the primary screening is expected to improve outcomes.

Aim of the study/ methodology

To assess previous cervical cytology history in women diagnosed with cervical cancer at Queen's Hospital, cancer Unit. We have retrospectively audited all the cervical cancers diagnosed at the department within the last 2years. We collected demographic and screening history data.

Results

We identified 44 cases of cervical cancer with the following histological subtypes: 32 squamous cell carcinomas (SCCs), 9 adenocarcinomas, 2 mixed squamous cell/ adenocarcinomas and 1 mixed squamous/ clear cell carcinoma. The majority (78%) of women with adenocarcinomas were referred because of abnormal smear, as opposed to only 50% of SCCs. Overall, 24 cases were identified through screening (55%). However, the early stage IA disease was diagnosed mainly with screening (92%), while the advanced stages were diagnosed with symptoms (100% stages 3/ 4).

21 of women were British, 14 Eastern European, 3 African, 2 European and 4 unknown. 12 out of 14 women with Eastern European origin and 10 out of 21 British women had no previous cervical screening history available (no previous smear test or smear test outside the UK). Among the patients with screening history, 8 (44%) were not compliant with the screening, of which 2 had abnormal smears but declined treatment. Interestingly, 9 out of 10 patients that were compliant with screening had long history of negative smear tests. Three of these patients had inoperable disease at diagnosis. None of the patients' diagnosed with cervical cancer over the last two years were under colposcopic surveillance (either non-compliant or on normal recall, one case had most recent smear report? Glandular neoplasia).

P – 23

To look at DNA Rates in the Colposcopy Clinic at Milton Keynes University Hospital and assess the Impact of Methods Introduced to Reduce this Rate

Dr Nidhi Shandil Singh, Ms Teresa Burden

Milton Keynes University Hospital, Milton Keynes, United Kingdom

Aim

To audit the DNA rates in the Colposcopy clinic over a 6 month period and compare to the NHSCSP guideline 20 and assess the impact of telephone reminders on DNA rates.
Clinicians were noticing a possible higher rate of non-attendance.

Methods

Retrospective audit data collected from hospital electronic database over a 6 month period 13/07/2018 to 18/01/2019.
The numbers of DNAs were looked at for an initial 3 month period (13/07/2018-12/10/2018) and then compared to a subsequent 3 month period (15/10/2018-18/01/2019) during which a trial was in place to contact patients by telephone the day before their appointment to confirm intended attendance.
The results were compared to the NHSCSP publication 20 guidelines which advise a default rate less than 15%.

Results

Between **13/07/2018 & 12/10/2018** there were 600 appointments in colposcopy clinic. During this period there were 49 DNAs (both new and follow-up patients). This is a default rate of 8.1%.
Of the 600 patients:

- 367 were new - 27 of these DNA = 7.36%
- 233 were follow-up - 22 of these DNA = 9.44%

After a telephone system was set up to call patients the day prior to their appointment - between **15/10/2018 & 18/01/2019**, there were 576 appointments, 36 patients DNA (both new and follow-up patients). This was a 6.25% default rate.
Of the 576 patients:

- 370 were new – 24 of these DNA = 6.49%
- 206 were follow-up – 12 of these DNA = 5.83%

The reasons why the patients DNA was not established

Conclusions

Clinicians felt that there was a much greater improvement after the telephone reminder system was set up than is actually reflected in the figures. Is this in line with NHSCSP before and after calls instigated – yes, in line with NHSCSP pub 20 guidelines of < 15% DNA. How much improved? … 1.85% improvement when comparing pre to post telephone reminders

Future Considerations

- Look at larger sample
- Compare new and follow-up patients
- Look at existing written protocols for management of non-attenders
- Consider reasons why patients defaulted - this would involve contacting individual patients.

P – 24
Audit to assess Adequacy LLETZ'S at Royal United Hospital Bath (RUH) over one year

Miss Greer Stuart, Mr Alexander Royston, Miss Claire Park

Royal United Hospital Bath, Bristol, United Kingdom

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The Management of Borderline and Low-Grade Abnormalities: Why are we Failing to Discharge those with Normal Colposcopy or Histology to Routine Recall

Miss Sangeeta Khinder, Miss Theresa Freeman-wang

Whittington Health, Archway, London, United Kingdom

Introduction

Risk of significant disease is extremely small when low grade cytology is associated with a normal colposcopy. Hence, they should be returned to community based routine-recall. Approximately 50% of women with an untreated low grade cytological abnormality at the first visit will revert to normal cytology and colposcopy over 24 months. Thus, these women may be followed up at 12 months in the colposcopy clinic or the community. This is a retrospective audit looking at the management and follow up of all borderline and low grade cytology referrals at the Whittington hospital NHS trust from January to December 2017.

Method

The database was drawn from the Mediscan colposcopy system.

Results

There were 858 cases (241 borderline, 617 Low grade). Colposcopy examination showed 97 high grade, 359 low grade, 375 normal/HPV, and 27 no impression documented.
Among the Low grade, 259 had biopsies, with 121 CIN1 and 103 normal/HPV. Only 21 and 32 were discharged from each group respectively. 27 of them showed high grade, 19 treated and 8 followed up.
Among the normal/HPV group, 51 had biopsies, 1 was adenocarcinoma/CGIN, 3 were high grade, 18 CIN 1 and 28 normal/HPV. Among the 324 without biopsies, only 38% were discharged.
From the high grade, 89 had biopsies, 33 of these corresponding with the colposcopy impression. 39 were CIN 1, and 17 HPV/Normal and majority were followed up, only 2 and 3 discharged in the respective groups.

Conclusion

Despite a normal/low grade colposcopy impression or biopsy result, few women were discharged to the community for follow up. This has a significant impact on cost and patient anxiety. Even though biopsy is not indicated for first low grade or less colposcopy examination, we picked up one adenocarcinoma in situ and 30 high grade cases. Education and the evidence should help change practice.

P – 26

Audit on Practice and Efficacy of Cold Coagulation in the Treatment of Cervical Intraepithelial Neoplasia

Dr INDIRA DEVI Buduru, Dr Mamata Patodi

University Hospital Birmingham, Birmingham, United Kingdom

Introduction

With effective Cervical cancer screening programmes and increasing detection of precancerous lesions in younger women, the treatment is becoming more challenging considering the reproductive needs in the younger age group.Treatment has evolved in the last few decades and now includes ablative options as an alternative to excisional procedures in women of reproductive age.Ablative procedure has added advantages of less demand for technical skills,portability,minimum complication rates, making them suitable for less resource settings.

Methodology

Our audit is aimed to measure the current practice of Cold coagulation in Our Trust against NHSCSP Guidance, and also to observe the success rates of Cold coagulation.

We conducted a retrospective audit reviewing all cases of cold coagulation in Heart Of England NHS Foundation Trust over a period of one year from 01/04/2015 to 31/03/2016.Cases were identified from colposcopy database.The details of patient demographics, referral smear, colposcopy opinion,Test of Cure results were reviewed.Data was analysed by simple statistical methods.

Results

257 cases of cold coagulation identified in the study period. >80% patients were <35years age and half of them are nulliparous emphasising consideration of minimal invasive treatment procedures. In 63%cases referral smear was Lowgrade. Squamocolumnar Junction was identified Colposcopically in all cases. Lesion confined to ectocervix in 79%cases.In 17% cases lesion extended to endocervix but upper limit was completely visible.Colposcopy opined 64%lesions as lowgrade.Biopsy was performed in all cases. In contrast to smear and colposcopy opinions,biopsy results revealed 76% as CIN2+,of them 12% had endocervical crypt involvement.Procedure was undertaken under local anaesthetic in all cases.Initial TOC results revealed 91% cure rates.On Further follow-up of TOC positive cases by colposcopy confirms HPV changes in 3% cases with routine recall advice,making the cumulative success rate of 94%.Repeat treatment was offered in 1.5%cases.

Our audit confirms the Trust's practice of cold coagulation is compliant with national guidance and our success rates are comparable to the excisional treatments.

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Hi DeClinical Indications Referrals – London Units – 2017.18 – Outcomes of Urgent and Non-Urgent Referrals and Comparison to 2011 Data

Miss Josephine Lyons Miss Theresa Freeman-Wang[2], Mr Ali Kubba[3], Mr Joe Llahi[4], Miss Ann Jackson[5,6], Miss Lorraine Burnham[5], Miss Susan Harper[6], Miss Heather Evans[7], Ms Nisrin Marcus[8], Mr Panos Sarhanis[9], Mr Adam Rosenthal[10], Ms Julie Mungovan[11], Ms Anna Parberry[12], Ms Shruthi Mohan[13], Mr Jorge Marin[14], Ms Sonya Narine[14], Mr Tim Green[15], Mr Eddie Bolandi[15], Mr Fateh Raslan[16], Ms Marianne Wood[17], Ms Sapna Shah[6], Ms Ola Folayan[18], Mr Dan Zamblera[18], Ms Sharifa Hussain[16], Mrs Jackie Hill[16], Mr Lawler Holman[2], Ms Lubna Housni[7]

[1]Imperial College Healthcare NHS Trust, London, United Kingdom, [2]Whittington Hospital , London, United Kingdom, [3]Guy's and St. Thomas' Hospitals Foundation Trust , London, United Kingdom, [4]North Middlesex University Hospital, London, United Kingdom, [5]Royal Free Barnet Hospital, London, United Kingdom, [6]Royal Free Chase Farm Hospital, London, United Kingdom, [7]Royal Free Hospital, London, United Kingdom, [8]King's College Hospital, London, United Kingdom, [9]North West London Hospitals NHS Trust, London, United Kingdom, [10]University College Hospital London, London, United Kingdom, [11]Homerton University Hospital Foundation Trust, London, United Kingdom, [12]Royal London Hospital, Bart's NHS Trust, London, United Kingdom, [13]Hillingdon Hospital , London, United Kingdom, [14]PHE SQAS London, London, United Kingdom, [15]Cyres , Cambridge, United Kingdom, [16]West Middlesex University Hospital, , United Kingdom, [17]St. George's Hospital, , United Kingdom, [18]University Hospital Lewisham, , United Kingdom

Introduction / Background

Clinical Indications referrals form a significant part of Colposcopy workload and this was previously audited for London in 2011, when Clinical Indications constituted 18.8% referrals to London Colposcopy Units. Comparative Figures for London 2017.18 – showed 31.5% referrals to Colposcopy were because of Clinical Indications. In 2011 – outcomes of Clinical Urgent referrals from 11 London Units - **≥ CIN 1** in Clinical Urgent referrals was 20.8% overall, with a range of 5.3 – 50%. Incidence of **HGCIN** on histology was 6.2% (range of 0 – 16%). The incidence of **invasive disease** was 1.6% range (0 – 5.5%)

Aims / Methodology

Re-audit Clinical Indications referrals in order to ascertain if higher percentage of abnormality was seen following referrals, and if not, review reasons for Clinical Indications referrals. A Clinical Indications query was created on Cyres and published to all London Units. Anonymised spreadsheets were sent to author to collate and analyse. Items of information included age, histology and final outcomes.

Results

16 of 26 London Units returned datasets.

Total London Referrals for year 2017.18 were 37,890. For the 16 London Units total new referrals equalled 25,350, of which 33.3% were for Clinical Indications (7.9% Urgent Clinical Indications and 25.4% Non-Urgent). Clinical Indications referrals constituted a significantly greater part of the workload (p=0.024) than in 2011.

Clinical Indications referrals percentage of total Colposcopy workload varied by Unit from 16 to 42%. Most of Clinical Urgent referrals were for PCB/ IMB or abnormal looking cervix, non-urgent referral reasons varied from polyps to 'unable to find cervix' in Primary Care

Outcome figures from Clinical Indications – Urgent 2017.2018 showed 3.4% had HGCIN/ HGCGIN (range 1-6.4%), LGCIN 9.9% (range 5.3-21.7%). This showed no statistical difference from 2011 (p=0.19).

12 cancers were identified from referrals with Urgent Clinical Indications 2017.18. (0.6% Urgent Clinical Referrals)

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Do the Current NHSCSP Publication Number 20 Standards for Colposcopic Accuracy need Reconsidering?

Miss Deirdre Lyons[2], Miss Ellie Murray[1], Louise Cadman[3]

[1]University Of Aberdeen, Aberdeen, United Kingdom, [2]Imperial College Healthcare NHS Trust, London, United Kingdom, [3]The Wolfson Institute of Preventive Medicine, Queen Mary University of London, London, United Kingdom

Introduction / Background

NHSCSP Publication 20 states that colposcopic performance is measured by Positive Predictive Value (PPV). However, PPV is dependent on prevalence of high grade (HG) disease. As prevalence of HG disease decreases, following HPV vaccination programme and implementation of Primary HPV testing, is PPV the correct metric to measure colposcopic accuracy?

Aims / Methodology

A clinical audit was conducted, with data collected from Cyres and Excelicare, which included all new patients with abnormal referral cytology, that received a biopsy in St Mary's Colposcopy clinic from 01/01/17 – 31/12/17. Sensitivity, specificity, PPV and NPV were calculated using the colposcopic impression and histological result. In addition, validation of PPV and sensitivity was explored/ calculated using final histology outcomes. The performance of the unit and each colposcopist was evaluated and compared with NHSCSP national standard.

Results

935 patients with abnormal referral group were analysed, split into low grade (LG) and HG cytology referral groups. Total abnormal cytology referrals had sensitivity of 57.63%, PPV of 49.64%, specificity of 91.55% and NPV of 93.73% for colposcopic impression. Within LG referrals, PPV was 24.45%, within HG referrals PPV was 67.50%.

If formal validation is undertaken, then PPV of 56.93% and sensitivity of 68.69% was calculated and compared with the original PPV and sensitivity values. As a unit, the PPV value of 49.64% did not meet the national guideline. Individually, 5 out of 10 colposcopists met the national guideline.

As the prevalence of HG disease decreases, the PPV decreases, irrespective of the splitting of the referral cytology group. Hence, it is probably not an accurate assessment of performance. This audit suggested that a single parameter is probably not sufficient to evaluate colposcopic performance. Statistical input would be of benefit in selecting parameter(s) that could be used to identify HG disease and not over-treat LG disease.

P – 28

To Audit the Correlation between the Depth of Loop Excision and Test of Cure Smear Results at Six Months.

Dr Nidhi Shandil Singh, Dr Anupama Rammohan[1,2], Adelaide Duku[1,2], Fathima Rawther[1,2], Selani Gooneratne[1,2], Suraj Ubhi[1,2]

[1]Milton Keynes University Hospital, Milton Keynes, United Kingdom, [2]University of Buckingham medical school, Buckingham, United Kingdom

Aim

To correlate depth of and number of pieces of LLETZ with test of cure smears.

Methods

Retrospective audit. Data collected from electronic records. Time period from 1/1/2017-31/12/2017. Total consecutive cases studied were 273.

Results

36% of women were 20-30 years, 35% were nulliparous. 35% were smokers. Depth of loop is 6-10mm in 53%, 1-5mm in 36%, 11-15mm in 3% and 16-20mm in 1.6% cases.78% cases it was intact loop and 12% was two pieces. 60% of cases margins were clear, 14% cases were involved and friable unable to comment in 0.4% cases.

72% cases deep lateral were clear and 6% deep lateral margins were involved.

Final histology was CIN 1 in 15%, CIN 2 in 6%, CIN 3 in 13%, CIN 1 and 2 in 22%, CIN 1 and 3 in 2%, CIN 1,2 and 3 in 13%, CIN 2 and 3 in 24%, no CIN in 2%, invasive cancer in 0.7% and unable to sample in 1% cases.

Negative test of cure in 84%, HPV positive in 11 %, low grade in 2% and borderline in 3% cases. Out of positive test of cure smears the depth of loop was < 5mm in 25%, 5-7mm in 37.5%, 8-10mm in 19% and >10mm in 19% cases. Two pieces in 31% and one piece in 69% cases.

Conclusion

In this audit we observed negative test of cure in 84% of cases, in 72% cases deep lateral margins were clear, in 60% cases all margins were clear, 78% cases had intact loop, depth of loop was 6-10mm in 53% cases and out of positive test of cure smears depth of loop was <5mm in 25% cases. There was CIN 3 in 44% cases, CIN2 in 64% cases and invasive cancer in 1% cases. Overall there is an 84% rate of negative test of cure smears after a LLETZ procedure within our unit.

P – 29

HPV triage vs Colposcopy: Normal Colposcopy is Insufficient to Exclude High Grade CIN in the Low Grade HR-HPV Screened Population

Mr Porfyrios Korompelis, Dr Fong Lien Kwong, Dr Amy Punshon, Ms Rachel O'Donnell, Ms Kathryn Clement, Ms Chris Ang, Mr Ali Kucukmetin, Ms Nithya Ratnavelu, Ms Ann Fisher

Northern Gynaecological Oncology Specialist Centre, Newcastle, United Kingdom

Introduction / Background

HPV triage results in detection of >90% of CIN and cancer. However, this pathway has resulted in increased colposcopy referrals as well as a change in the patients seen in colposcopy, with reduction in low risk cases. This study aimed to 1) understand the incidence of CIN2+ in this population, 2) assess compliance with NHSCSP standards for assessment and management.

Aims / Methodology

Patients referred to colposcopy Jan-Dec 2016 with a screening cytology result of borderline or low-grade, positive for HR-HPV were identified from the departmental database. Patient demographics, colposcopy findings and biopsy histology were collated alongside outcome for onward intervention/screening.

Results

Median age of the 505 patients included was 30 years (range 20 to 64). 260(51%) had normal colposcopy, 194(38%) had low- grade change, 33(7%) high-grade change and 18(4%) unsatisfactory examination.

In total 415(82%) patients underwent biopsy. The overall incidence of CIN2+ was 97(23%). In the subgroup of patients with normal colposcopy examination, 192(74%) underwent biopsy. Results were normal in 70(36%), CIN1 in 78(41%), CIN2/3 in 30(16%) with 1(0.4%) case of adenocarcinoma, (7% inadequate). The overall incidence of detected CIN2+ in those referred with borderline/low-grade cytology and HR-HPV was 16%. Abnormal colposcopic examination resulted in a PPV for CIN2+ of 39%, NPV of 79% and sensitivity of 15%.

All patients with CIN3/CGIN underwent LLETZ with 100% compliance with TOC. 62% of patients with CIN2 underwent LLETZ, with 38% opting for conservative management. Compliance with discharge to routine recall following normal biopsy was 82% and repeat cytology in 12 months following CIN1 was 96%.

Conclusions

Biopsy could be justified in normal colposcopy as it is associated with at least 16% high grade lesions. Further qualitative studies are required to understand the morbidity associated with punch biopsy before recommendation for universal biopsy could be made.

NHS Cervical Screening Programme. *Colposcopy and Programme Management. NHSCSP Publication number 20. Third Edition March 2016.*

P – 30
Conservative Management of CIN2: Challenges in Implementation and Outcomes

Dr Christina Founta, Miss Ellen Nelissen, Mr David Milliken,

Taunton and Somerset Foundation Trust, Taunton, United Kingdom

Background
More practices in the UK are implementing conservative management of a selective group of women with Cervical Intraepithelial Neoplasia 2 (CIN2) lesions. A recent meta-analysis showed that over 2-year surveillance 50% of women with untreated CIN2 regressed, suggesting that young women likely to attend follow-up could avoid LLETZ and its associated complications. However, the NHSCSP guidelines continue to suggest treatment for women with CIN2+ disease.

Objectives
To report our outcomes and discuss the challenges of introducing this as a new practice within the current UK system.

Methods
Conservative management of CIN2 was introduced in our department in January 2016. Since, our practice has been evaluated by 2 audit cycles (1/2016 – 7/2017 and 7/2017- 12/2018). Our electronic system was hand-searched for results and management.

Results
Our cohort included 33 women. Most referral smears were low-grade HPV positive (25/33, 76%), 6(18%) were high grade and two women (6%) were referred with abnormal symptoms. Thirty-one women attended follow-up (94%). Of these, 1 regressed to negative colposcopy and cytology at six months (3%), and 10 women had a LLETZ (32%) amongst which 8(26%) were done at six months. Of the remaining 20 women, 9(29%) have been discharged, as they were considered to have regressed, and 11(35%) are still on follow-up.
In response to our first audit cycle, which showed heterogeneity in management, conservative management of CIN2 was officially implemented in our colposcopy guideline in December 2017. Our re-audit continued to show similar results therefore our guidelines have been further updated to be more descriptive. The main issues in management were that cytology was not always repeated and follow-up was done in 12 months rather than six.

Conclusion
Formal implementation of conservative management for CIN2 in the NHSCSP document 20 would be of great value in standardizing and facilitating UK colposcopy practices.

P – 31
Borderline in Endocervical Cells. What do we do?

Mrs Nikki Webb

Southampton University Hospital Trust, Southampton, United Kingdom

Introduction / Background
NHSCSP 20 guidelines state that a cytology result of Borderline in Endocervical cells should be referred to colposcopy and women should be seen within 6 weeks. In our department we grade these results to be seen in 2 weeks. This was agreed some years ago as we found that many were found to have high grade CGIN or a malignancy. Management at colposcopy seems to be varied, ranging from biopsy to LLETZ at first appointment.

Aims / Methodology
This study aims to review the pathway and diagnostic management for borderline in endocervical cells results in our department. It will also look at histology results to see if there is evidence to keep seeing these women in 2 weeks.
Patients were identified from the colposcopy database Cyres and clinical information was reviewed using the trust healthcare records and open Exeter.
The criteria that was used included, cytology history, colposcopy impression, management at first appointment, histology of biopsy or LLETZ and any subsequent cytology.

Results
10 patients were identified between August 2017 - August 2018. Age ranged from 25-57
4/10 women had LLETZ at first appointment, 3/10 women had LLETZ after a biopsy,3/10 untreated.
3/10 had HGCGIN
3/10 had CIN >2
1/10 CIN1
1/10 no biopsy. Colposcopy normal
1/10 tuboendometrioid metaplasia. No further treatment
1/10 inflammation. No further treatment
In conclusion 6/10 (60%) had a high grade abnormality on histology, therefore it is reasonable to continue to see these women within 2 weeks.

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The Outcome in Failed Test of Cure (TOC) after Large Loop Excision of Transformation Zone (LLETZ)

Dr Suad Hirsi-farah, Mrs Jill Fozzard, Mrs Jilly Goodfellow, Dr Michelle Russell

The Royal Victoria Infirmary Hospital (RVI), Newcastle, United Kingdom

Introduction / Background

The high-risk Human Papilloma Virus (HR-HPV) is the causing pathogen for cervical cancer and it's precursor. A combined cytology and HR-HPV testing (TOC) is used 6 months post treatment to rule out residual or relapse disease and safe return to normal (routine) screening.
The surveillance has changed to primary HR-HPV rather than combined; because of the knowledge HR-HPV is pre-requisite of persistent lesion, recurrence and progression to cancer.
There is a lack of published data about TOC despite it is introduction in to cervical screening programme 2012, so we realised the importance of obtaining more knowledge in this. We did this audit to shine a light to the outcome of test cure and gain confidence in managing those who fail their test of cure.

Aims / Methodology

Retrospective audit of women who failed TOC 65 of total 335 cases of Large Loop Excision of Transformation Zone (LLETZ) that was performed in one centre during 18 months.
The aim is to detect treatment failure or residual/recurrence disease.

Results

All the cases were positive for HR-HPV (100%) while only 18.46% had abnormal cytology, this could indicate LLETZ has good ability in removing the dysplastic lesion but not in clearing the infected tissue. 18.46% had abnormal colposcopy impression and 6.15% had unsatisfactory colposcopy.
60% of these patients were discharged to routine recall from the first appointment, 35.38% had repeat cytology +/- colposcopy in 12 months and 4.62% had second treatment. One woman had repeat LLETZ (the only high grade) and 2 had hysterectomy (both had low grade/unsatisfactory colposcopy because of multiple LLETZ) non had residual CIN.
The outcome was the same in the group with incomplete margins (66.15%) and those with complete margins (33.85%. A similar number of patients were discharged to routine recall from the first appointment.

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Borderline Nuclear Change/Low Grade Dyskaryosis with High Risk HPV – Outcomes from a Single Centre in East London

Mr Saurabh Phadnis, Miss Dhivya Chandrasekaran, Mr Mihail Daia, Ms Ana Parberry

Royal London Hospital, Barts Health NHS Trust, London, United Kingdom

P – 34
Clinical Workload Pre and Post Cervical Check Controversy

Dr Niamh Joyce, Dr Jayavani Penchala, Dr. Rosemary Harkin

Louth County Hospital Colposcopy Unit, HSE, Dundalk, Ireland

Introduction / Background
Since the recent Cervical Check controversy, there has been an increase in workload on colposcopy services and a delay in obtaining smear results largely due to the fact that women with normal smears have been offered a free repeat smear test following consultation with a GP. Furthermore, there has been an increase in referrals to colposcopy units if women or GPs are concerned about symptoms such as unexplained vaginal bleeding or a suspicious cervix.

Aims / Methodology
We sought to assess the impact that the Cervical Check controversy has had on the Louth County Hospital Colposcopy Service by reviewing cases referred with a clinically suspicious cervix or abnormal vaginal bleeding over an 8 month period: 4 months pre-controversy and compared findings 4 months post-controversy.

Results
The number of referrals more than doubled over the study period: 42 pre-controversy to 90 post-controversy.
In the pre and post-controversy groups, 18/42 (43%) and 23/90 (25%) of women had a colposcopy directed smear, results were available within 34 days and 46 days, 18/42 (43%) and 54/90 (60%) had cervical biopsies taken respectively.
Colposcopy impression in the pre and post-controversy groups was normal in 20/42 (48%) and 57/90 (63%) of women and 7/20 (35%) and 31/57 (54%) underwent cervical biopsy respectively. Histology results were normal in 100% and 87% of pre and post-controversy groups respectively. The post-controversy group had 4 (13%) biopsy results of CIN1.
There were 2 cases of CIN 2 in women with high grade colposcopy impression. All other histological results were CIN 1 or normal.
Despite the increase in clinical referrals, there has been no increase in histopathological correlation. The increase in work load is reflected by the increased time interval of smear results and by the increased number of biopsies taken in women with normal colposcopy impressions post Cervical Check controversy.

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Audit of Correlation of Depth and Number of Pieces of LLETZ with Test of Cure Smears

Ms Anupama Ram Mohan, Miss Adelaide Duku, Fathima Rawther, Selani Gooneratne, Suraj Ubhi, N Shandil Singh

Milton Keynes University Hospital, United Kingdom

Introduction and background

For ectocervical lesions the depth of loop removed should be more than 7 mm (95%) and should be less than 10mm in reproductive age group. Incomplete excision at ectocervical and deep lateral margins are associated recurrence.

Aim and methodology

To correlate depth of and number of pieces of LLETZ with test of cure smears.
Retrospective audit. Data collected from electronic records. Time period from 1/1/2017-31/12/2017. Total consecutive cases studied were 273.

Results

36% of women were 20-30 years, 35% were nulliparous. 35% were smokers. Depth of loop is 6-10mm in 53%, 1-5mm in 36%, 11-15mm in 3% and 16-20mm in 1.6% cases.78% cases it was intact loop.60% of cases margins were clear and 14% cases were involved.
72% cases deep lateral were clear and 6% deep lateral margins were involved.
Final histology was CIN 1 in 15%, CIN 2 in 6%, CIN 3 in 13%, CIN 1 and 2 in 22%, CIN 1 and 3 in 2%, CIN 1,2 and 3 in 13%, CIN 2 and 3 in 24%, no CIN in 2% and invasive cancer in 0.7%.
Negative test of cure in 84%, HPV positive in 11 %, low grade in 2% and borderline in 3% cases. Out of positive test of cure smears the depth of loop was < 5mm in 25%, 5-7mm in 37.5%, 8-10mm in 19% and >10mm in 19% cases.

Conclusion

In this audit we observed negative test of cure in 84% of cases, in 72% cases deep lateral margins were clear, in 60% cases all margins were clear, 78% cases had intact loop, depth of loop was 6-10mm in 53% cases and out of positive test of cure smears depth of loop was <5mm in 25% cases. There was CIN 3 in 44% cases, CIN2 in 64% cases and invasive cancer in 1% cases. Overall there is an 84% rate of negative test of cure smears after a LLETZ procedure within our unit.

P – 36
Colposcopy in Pregnancy Audit

Mr Abhijeet Shah, Ms Sarah Bugren, Mr John Seaton, Ms Chandrima Basu

East Kent Hospitals University NHS Trust, William Harvey Hospital, Ashford, United Kingdom

Introduction / Background
The management of the abnormal smear in pregnancy remains a challenge to the modern colposcopist. Colposcopy in pregnancy is difficult. The primary aim of colposcopic examination in pregnancy is to exclude invasive disease and to defer biopsy or treatment until after delivery. We conducted a retrospective audit in a busy University teaching Hospital over a period of 5 years.

Aims / Methodology
A total of 58 women were identified in a 5 year cycle from April 2011 until March 2016 for the audit and 41 qualified the inclusion criteria. This was a retrospective audit of women diagnosed with an abnormal cervical cytology, who subsequently underwent a colposcopic evaluation with or without cervical biopsy during pregnancy. The "*colpo-histopathological concordance"* was evaluated.

Results
41 women, fulfilling the study inclusion/exclusion criteria, constituted the study cohort. Among them, on colposcopic examination, 6 women (15%) showed "high grade changes", 17 women (41%) showed "low grade changes", 6 women declined examination and the remaining 12 women (29%) had a "negative/normal colposcopy.
Two women had biopsy undertaken during pregnancy as colposcopy showed high grade aceto white changes. In one women, CIN 3 was confirmed on histology and had LLETZ postpartum whilst the biopsy undertaken in other woman was normal. There was no invasive cancer in any women postpartum who had LLETZ.
We found a colposcopic overestimation in 1 case (2%), underestimation in 5 cases (12.1%), and a concordance in 47 cases (83.91%). A better reliability of colposcopy in women in the firsts two trimesters and in particular in women ≤20 weeks pregnant was found.
Following the audit, colposcopy in pregnancy worksheet was generated and available for colposcopists in the clinic.

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Evaluation of a See and Treat Cervical Screening Programme in the Afar Region of Ethiopia, a Huge, Sparsely Populated Region with a Largely illiterate Pastoralist Population

Dr Margaret McDougald, Mrs Mohammed Hawa[1], Miss Mohammednur Alleweya[1], Ms Mohammed Mayram[1], Mr Nuha Mohammed[2]

[1]Barbara May Maternity Hospital, Mille, Ethiopia, [2]Afar Pastoralist Development Association, Samera, Ethiopia

Introduction / Background

Cervical cancer is 2nd leading cause of female cancer deaths in Ethiopia, now exceeding maternal deaths The Ethiopian Government has prioritised cancer control, With TV promotion of screening and newly introduced HPV vaccination programme, mainly in urban areas. 80% of population live in the rural and in the Afar Region, it is 87%. The study seeks to evaluate the feasibility of cervical screening in the bush.

Aims / Methodology

Screening offered to married women over the age of 20 attending out gynae clinic, with video in the waiting area to raise awareness. In the bush, pre-preparation via our extensive network of community health workers. Comprehensive history is taken. Screening is by "See and Treat" using VIA, Lugol's iodine and thermocoagulation, an efficient cost effective method not requiring any external power source. Video colposcope allows recording of findings. Biopsy from ACW areas for confirmation of diagnosis.

Results

400 patients screened, 280 in clinic & 120 in the bush. Overall 13.1% screened positive, 7.9% low grade. Clinic patients 34% bush, 35% Afar Town and 27% Amara, which does not reflect demographic of the Region. Difference between clinic and bush significant at $p < 0.05$. Data also obtained on age, age at marriage, no of periods before marriage, HIV status, contraceptive use and family size.

Conclusion

Feasibility of delivering the programme in the bush demonstrated, despite difficulties in access and extremely poor facilities in rural health centres. More work needed to raise awareness and acceptability in the town. HPV associated lesions appear to be more prevalent in the urban population. System offers potential for future training and assessment. Possibility of delivering vaccine to girls in tandem with screening now being explored.

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2 year Review of LLETZ Procedures in a NHS TRUST with 2 Crosssite Teaching Hospitals from 2017 through 2018

Mr Manish Maheshwari, Mr Mike Katesmark, Ms Faizah Mukri, Ms Lubna Haque

Epsom and St Helier Hospital, Pinner, United Kingdom

Review of all LLETZ procedures over a 2 year period. Main focus on index smear, indication for LLETZ, whether a see and treat or after a biopsy, colposcopic impression, ga or la, reason for GA, depth of excision, final HP diagnosis, marginal status, toc/smear if available.

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Cervical Cancer Audit in a NHS TRUST with 2 cross site Hospitals over a 2 year period from 2017 through 2018

Mr Manish Maheshwari

Epsom and St Helier Hospital, Pinner, United Kingdom

Review of all cervical cancer cases from 2017 over a 2 year period. All cases were reviewed in the colpocopy MDT where previous smears were available. The presentation will include smear history, presentation, review of cytology where necessary, histology and staging, treatment and outcom

P – 40

DYSIS Colposcopy vs DYSIS Map in Women with High Grade Cytological Abnormalities: What is the Rate of Variation in Findings Between the 2 Modalities and How do they Compare in the Diagnosis of HG CIN

Mr Tarang Majmudar, Miss Hema Nosib, Mrs Ewa Bak, Mrs Lynn George

Hinchingbrooke Hospital, North West Anglia NHS Trust, Cambridge, United Kingdom

Introduction / Background

DYSIS was introduced as adjunctive technology to the colposcopy unit at Hinchingbrooke hospital in November 2017. The aim of this study was to assess the impact on clinical practice of introducing this new technology

Aims / Methodology

66 women with high grade cytological abnormalities between December 2017 and 2018 were seen by a total of 4 colposcopists. Women with non-concurrent findings (HG v/s Normal or LG) between DYSIS colposcopy and DYSIS map and who had biopsies were analysed. DYSIS map findings were used a direct comparator and not as adjunctive information. The study assumes that DYSIS video colposcopy is equivalent to Standard binocular colposcopy.

Results

We noted a non-concurrence between DYSIS colposcopy and DYSIS map findings in 22.7% of these women. Overall the non-concurrence rates were lesser than for women who presented with LG abnormalities (38.8%, data presented in another poster).

HG disease on DYSIS map vs normal/LG disease on DYSIS colposcopy was noted in 33.3% of non-concurrent cases. HG CIN was noted on histology in 100% of these women. In the absence of DYSIS map findings these women would have had diagnosis and treat rather than see and treat.

HG disease on DYSIS Colposcopy versus Normal/LG findings on DYSIS map was noted in the remaining 66.7%. HG CIN on histology was noted in 80% of these women. In the absence of DYSIS map some of these women could have had over treatment if a see and treat policy was adopted.

Conclusion

It would appear that DYSIS map is more reliable in comparison to DYSIS colposcopy in diagnosis of HG disease when there is non-concurrence of findings. This finding should be interpreted with caution due to the small sample size.

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Diagnostic Accuracy of DYSIS Colposcopy and DYSIS Map in Diagnosis of HG CIN following Recent Introduction of DYSIS Technology to Clinical Practice

Mr Tarang Majmudar, Miss Hema Nosib, Mrs Ewa Bak, Mrs Lynn George

Hinchingbrooke Hospital, North West Anglia NHS Trust, Cambridge, United Kingdom

Introduction / Background

DYSIS was introduced as adjunctive technology to the colposcopy unit at Hinchingbrooke hospital in November 2017. The aim of this study was to assess and compare outcomes with existing evidence as assurance process following introduction to practice of a new technology.

Aims / Methodology

95 women who had cervical biopsies (diagnostic and therapeutic) following referral for an abnormal smear of any grade between December 2017 and September 2018 were included in this study. These women were reviewed by one of 4 colposcopists at the unit. DYSIS video colposcopy and DYSIS map findings for each of these women was compared. CIN2 + was used as the cut-off point. Data was collected and retrieved for analysis from electronic databases

Results

DYSIS Colposcopy was noted to have a sensitivity of 74.6%, specificity of 75%, PPV of 83% and NPV of 64.3% in diagnosis of HG disease. DYSIS Map by itself was noted to have a sensitivity of 67.7%, specificity of 66.7%%, PPV of 75.5% and NPV of 52.2%.

Conclusion

The study appears to indicate that DYSIS Colposcopy has a slightly greater sensitivity, specificity, PPV and NPV in comparison to DYSIS Map. This should be interpreted with caution due to the small sample size of the study and verification bias created by the exclusion of women with suspected low grade disease that did not have a biopsy. DYSIS Map findings were used as a direct comparator to DYSIS colposcopy and not as adjunctive information.

P – 42
Comparism of Cold Coagulation to LLTZ for Treatment of CIN3

Dr Aliyah Al-Sudani, Dr Elzahra Ibrahim, Dr Yahya Kamal

The Rotunda Hospital, Dublin, Ireland

Background
CIN3 can be treated by ablative therapy or excisional therapy. ablative therapy has less adverse future obstetric outcome but will not provide diagnostic information, while excisional therapy provides diagnostic sample but associated with preterm labour, low birth weight and increased fetal morbidity & mortality.

Objective
To look at the outcome of CIN3 treated cases with cold coagulation compared to LLETZ.

Method
Retrospective review of the data of 600 women receiving treatment for CIN3 either cold coagulation or LLETZ during the last 2years in the Rotunda hospital colposcopy department. confiders were age, parity and smoking status

Results
Majority of women undergone LLETZ 80%, Cold coagulation 20%. Most of the patient undergoing cold coagulation were non-smoker and nulliparous. 1st test of cure at six months after treatment for cold coagulation was negative in 90%, 10% had either LSIL or ASCUS. HPV was positive in 95% were all sent for colposcopy. In comparison to LLETZ treatment there was almost similar outcome.

Conclusion
In carefully selected cases cold coagulation can be as effective as LLETZ in treating CIN 3, with the benefit of avoiding the risk of cervical incompetence in future pregnancies.

P – 43

An Audit about the Outcome of Patients with Discrepancy between Cervical Screening, Colposcopic findings and Histopathology Results with their Surgical Treatment Success Rates

Dr Zakia Habib

Dar Al Shifaa Hospital, Abu Dhabi, United Arab Emirates

Objectives

To compare the performance outcome of patients with discrepancy between cervical screening and histopathology results and their success rate.
The Aim of this Audit is to identify patients with normal Pap smear who had abnormal colposcopic findings, Histopathology findings and to review the treatment success rate.

Patients and Methods

The study sample size consisted of 60 women who underwent colposcopy and their surgical treatment modalities for abnormal examination and histology during the period or May 2017 till July 2018. All Demographic details of the patients were entered in an Excel spread sheet noting age, parity, symptoms, contraception, smoking status, chronic diseases, index smear report, HPV status, Colposcopic impressions and biopsy results. Different treatment modalities including LEEP Procedures, Excision reports as well as follow up of the patients with test of cure results. Histology was taken as gold standards.

Discussion

Pap tests have a false negative rate of about 10 to 20 percent of all negative results, which might sound like a cause for alarm.
The false positive rate is low, between 1 and 10 percent of all positive results, but unfortunately, such a result can lead to more invasive treatment that might in reality be unnecessary.
A false negative result might allow precancerous cells to develop into cancer if they are not detected in a future round of Pap testing.
The combination of HPV and Pap test screening would be beneficial for many reasons. Firstly, only those who are found to have infections with carcinogenic HPV types would be referred for Pap testing. Only about 6% to 10% of women above 30 have HPV infections, so more than 90% of women would be able to move from Pap tests every three years to HPV tests every five years. Secondly, Pap tests would only be done when there is a high concern that pre-cancerous lesions could be present. So technologists would be viewing 10-fold less Pap test slides, meaning the interpretation would be less prone to mental fatigue. Because technologists know that HPV has been detected in the samples they view, they would be more vigilant in looking for abnormal cells. Finally, combination testing would be cheaper – because HPV tests are automated and don't require the expertise of high-salaried technologists, they're not as expensive as Pap test

Conclusion

The sensitivity of a Pap test is about 70 to 80 percent
Most false negatives — 90 to 95 percent of them — are due to inadequate sampling or improper slide preparation.
With HPV tests, the false negative rate is only 5%.
Success rate of LLETZ were as high as 90.9 % which is excellent outcome compared to the NHSCSP with complete excision and negative pap smear at 6 months follow up, no test of cure HPV was implemented in the 6 months follow up after treatment of CIN.

P – 44

Evaluating Excisional Treatment and Follow-up of Women with Cervical Intra-epithelial Neoplasia at Princess Anne Hospital

Mr Obinna Mba, Dr Gayatri Upasani, Miss Nikki Webb
University Hospital Southampton Nhs Foundation Trust, Southampton, United Kingdom

Introduction

Loop excision of the cervical transformation zone (LLETZ) is a recognised treatment for women with high-grade cervical intra-epithelial neoplasia (CIN). The NHSCSP (Publication No.20) recommends that 80% of these are managed in outpatient using local anaesthesia and removed as a single specimen. Treated women are about 2-5 folds at risk of cervical cancer and should be followed up in all cases. A ‘test of cure' cytology should be performed at 6 months.

Objective

To evaluate LLETZ treatment and follow-up of women with CIN at a tertiary colposcopy unit against the NHSCSP standards.

Method

A retrospective review of treatments between 01/08/2017 to 31/12/2017. 50 consecutive cases were analysed from data obtained from the unit's colposcopy electronic database (compuscope) and results portal (chart). Princess Anne Hospital is a tertiary hospital in Southampton and a regional cancer centre for Wessex.

Results

About three-quarters of those studied were less than 40 years, half of which were smokers. The main indication for excisional treatment was high-grade CIN on biopsy (60%) and 32% were based on cytological and colposcopic impression of high-grade disease. Most were done in outpatient setting local anaesthesia (78%) and the excised tissue removed as a single specimen (86%). 38% of the excision margins were free of CIN histologically. 86% had follow-up ‘test of cure' cytology in the community and 10% did not respond to invitation. 56% follow-up cytology was done at 6 months, 37% at 7-12 months and 7% after 12 months. Majority of the follow-up cytology was HPV negative (79%).

Conclusion

Our unit met the recommendations for LLETZ treatment with respect to indications, anaesthesia and single excision specimen. Majority were HPV negative at follow-up indicating adequate treatment. More effort is required to enhance community compliance with the recommended ‘test of cure' follow-up protocol

P – 45

Different Guidelines, Same Story: A Review of the Management of Patients Diagnosed with CGIN before and after 2016 update

Dr Laura Jamison Dr Philip Birkett[2], Mrs Jacqueline Jamison[2], Dr Daniel Douglas[2]

South Eastern Hospital Trust, Belfast, United Kingdom, [2]Northern Trust, Antrim, Northern Ireland

Introduction / Background

Publication 20 was updated in March 2016 from its initial publication in 2010. We were keen to examine if treatment and follow up of patients diagnosed with Cervical Glandular intraepithelial Neoplasia (CGIN)was altered following the update and to understand what the current practice is within this population.

Aims / Methodology

Patients were identified using the regional cellular pathology system. We identified 50 patients coded as CGIN between January 2014 and December 2018. We then used the Excelicare Colposcpy Record and Masterlab to follow each patient journey through follow up until January 2019.
We were particularly focused on colposcopic examination waiting times and outcomes. We also reviewed the reported HPV status (if undertaken) on post treatment smears.

Results

We found that there was a wide variation in the management of patients with glandular abnormalities. This has continued despite the update to Publication 20 in 2016.
Our intention is to present our data at the regional colposcopy meeting in Summer 2019. We intend emphasize recommended practice and re-audit.

P – 46
Moving to Masey – a Foundation Trust's Experience (it's free and it works!)

Mr Greg Pearson, Miss Abi Kingston, Sister Rosie Stennings

Salisbury NHS Foundation Trust, Salisbury, United Kingdom

Introduction / Background

There are a variety of methods of documenting the colposcopic examination. In UK practice the requirements of the NHS Cervical Screening Programme quality assurance mean that it is essential to to map colposcopic findings to KC65 targets. Digital platforms can assist with this, but commercial software can carry a significant financial burden. MASEY is a Microsoft Access-based platform developed by Public Health England as a colposcopy database; it is used for clinical data input and allows data analysis for audit. It is free to install and support for implementation is available from PHE. We describe our Trust's experience of migrating from WCI and CYRES to this system.

Aims / Methodology

Discussion of the implementation of this platform to a single-site NHS Foundation Trust. Colposcopy notes were previously hand-written, and data separately inputted onto WCI; we implemented the MASEY.

Results

Using MASEY has yielded efficiency and cost benefits for our department, facilitating migration from paper to digital notes (with direct input by Colposcopists avoiding transcription error) and allowing installation on multiple terminals. We have avoided paying for commercially-developed software. The product allows audit to be undertaken rapidly by clinicians and the HBPC.

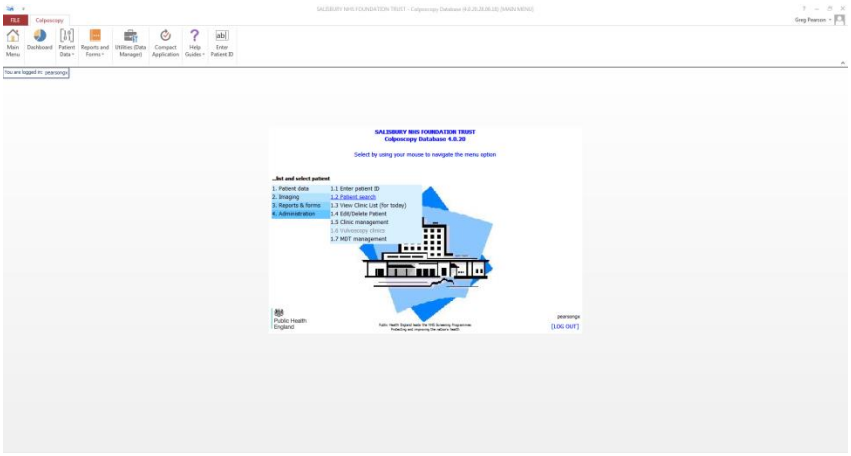

Figure 1: MASEY screen sh

P – 47

Management of Women with Atypical Squamous Cells of Undetermined Significance on Cervical Cytology, A Retrospective Audit

Dr Ike Uzochukwu, Professor Nadine Farah

Coombe Women & Infants University Hospital, Dublin, Ireland

Free testing for high-risk human papilloma virus types was introduced in 2015, in order to triage smear test results of atypical squamous cells of undetermined significance, ASCUS and low grade squamous intraepithelial lesions, LSIL for primary care in Ireland.

The aim of this audit was to assess appropriate waiting times and management outcomes among women with ASCUS and high-risk HPV on liquid based cervical cytology.

A retrospective audit was carried out over a 12month period in 2016 involving 465 women who were referred to the colposcopy clinic with ASCUS and a positive finding of high-risk HPV on routine cervical cytology. Auditable standards were developed using the Irish Cervical Screening Programme Guidelines. This requests that at least 90% of women with ASCUS and a positive finding of high-risk HPV should be offered a timely colposcopy appointment within 8weeks following receipt of the referral. A proforma reviewed appropriate colposcopy appointment waiting times for women with ASCUS who were high risk HPV positive. Outcomes in terms of the cervical biopsy and LLETZ results were also assessed.

Women with ASCUS and positive high-risk HPV had an average colposcopy appointment waiting time of 40days, 97% of these women were seen within 8weeks. 65% of women had a cervical biopsy at there first visit to the colposcopy clinic. Of these women who had a cervical biopsy, 33.3% had CIN 1, 16.8% had CIN 2, 11.6% had CIN 3, 0.2% had CGIN and 0.4% had squamous cell cervical cancer. 4.5% of women had LLETZ treatment at the first colposcopy clinic visit. The remaining women with high-risk CIN had LLETZ treatment within 1month.

This audit highlights commendable timely assessment of women with ASCUS and positive high-risk HPV.

P – 48
Value of Colposcopic Impression in Low Grade Cytology Referrals

Dr Mohamed Otify, Mr Alex Laios, Mr Amudha Thangavelu, Mr Georgios Theophilou, Mr David Nugent, Mr Tim Broadhead, Mr Richard Hutson, Mr Diederick De Jong, Mr Hany Nagib

St James's University Hospital, Leeds, United Kingdom

Introduction / Background
There is considerable subjectivity and inter-observer variability in the grading of CIN. This variation is markedly reduced for high-grade lesions.
A retrospective study showed that in women with low grade cytological abnormalities and a normal colposcopic examination; only 7.8% had CIN2 or CIN3 on loop excision.
Systematic review of studies comparing CDB with reference histology from cones or hysterectomy specimens shows a lower positive predictive value (PPV) for CIN1 and CIN2 (16%, 32%) than for CIN3 (86%). A systematic review demonstrated that the PPV of a colposcopic impression of CIN3 was 78%. PPV declined as severity of CIN decreased.

Aims / Methodology
We aimed to look at current colposcopy impression outcomes and whether there is a point in performing a Bx in LG referral and normal Colposcopy.
Cases fulfilling these criteria in the 6 months periods from 01/04/2017 till 30/09/2017, were identified retrospectively.

- "New referral Colposcopy
- Smear/Indication
- Colposcopic impression
- Action
- The following demographics were also collected "DOB, Date seen, Surgeon name, SCJ position and Colposcopy Histology results.

Results
368 patients were identified with LG smears new referrals. They were further subgrouped into the following categories

1st group
Colposcopic impression (Normal/ HPV changes, inflammation and squamous metaplasia)
Out of 125 with non CIN colposcopic impression there was 35 CIN 1 (28%)
Out of 125 with non CIN colposcopic impression there was 8 CIN 2&3 (6.4%)

2nd group
Colposcopic Impression of Low grade, high grade and CGIN
61 out 196 were true low grade CIN (31.1%)
26 out of 46 were true high grade CIN (56.5%)
135 out of 196 were false positive for low grade CIN (68.9%)
20 out of 46 were false positive for high grade CIN (43.5

P – 49
Rate of Test of Cure at the Hospital Site following LLETZ for HG CIN

Mr Alex Laios, Dr Mohamed Otify, Miss Amudha Thangavelu, Mr Georgios Theophilou, Mr David Nugent, Mr Tim Broadhead, Mr Richard Hutson, Mr Diederick De Jong, Mr Hany Nagib

St James's University Hospital, Leeds, United Kingdom

Introduction / Background
BSCCP guidelines recommend women treated with HG CIN should be invited six months after treatment for TOC in the community. Patient compliance with follow-up protocols should be encouraged

Aims / Methodology
We aimed to audit LLETZ procedures performed for HG CIN within a six-month time frame to help guidance for TOC in community by 6/12 according to the BSCCP guidelines. A retrospective data collection through a dedicated PPM database at our tertiary referral centre was carried out. All patients who had LLETZ for HG CIN from 01/04/2017 to 30/09/2017 were identified. A Review of reasons for post LLETZ TOC in SJUH as opposed to community was audited and the decision making process was recorded.

Results
A total of 146 women were identified. 30 and 116 women received their test of cure (TOC) at the hospital and community respectively. Of the 30 patients, nine women were excluded due to cancer diagnosis and incomplete excision of their cGIN. The results are presented ion the following table.

Reason for post LLETZ TOC in SJUH	Consultant	Cytopathology MDT	Colposcopy nurse	Trainee/Fellow	ellane	Total	Possibly avoided
Histology						21	
HG CIN complete excision	2		2		2	6	6
HG CIN incomplete excision	3	5	2	1		11	5*
CGIN completely excised	1		1			2	0
Suspected glandular abnormalities		1				1	0
Inflammation		1				1	0

One case was delayed TOC at 9/12. One woman returned to SJUH despite recommendation for 6/12 TOC by GP. Of the possible unavoided cases to receive TOC at the hospital site. Two decisions made by Colposcopy Nurses, one decision by Fellows, two decisions by Consultants. Decision making for site of TOV appears slightly erratic with the exception of one case who had delayed TOC at 9/12 instead of 6/12.
6/21 cases should have definitely been avoided (28.5%). A further 5/21 cases might have been potentially avoided (23.8%). The audit provides evidence for potential reduction of the hospital follow up in this cohort of patients ranging from 28.5% to 52.8%

P – 50

An Evaluation of the Role of Colposcopy in the Management of Abnormal Vaginal Bleeding and the 'Suspicious Cervix'

Mrs Catherine Muggeridge, Dr DWG Beynon

Frimley Park Hospital, Frimley, United Kingdom

Method

Retrospective analysis of the patients referred for Colposcopy with indications other than abnormal cervical cytology.

Results

Number of patients and patient indication, for referrals to a Colposcopy Clinic over a 12-month period.

Discussion

Is a Colposcopy clinic the appropriate place for referral and does Colposcopy affect the management of these patients

P – 51

An Evaluation of the Outcomes of Women Referred to Colposcopy with a Clinically Suspicious Cervix over a 12 month period (October 2017 - October 2018) and the Impact Following a National Cervical Screening Crisis.

Ms Claire Fry, Ms Sinéád Cleary[1], Dr Nadine Farah[3], Dr Gunther Von Bunau[2], Dr Cliona Murphy[3], Dr Kate Glennon[1]

[1]Tallaght University Hospital, Tallaght, Dublin 24, Ireland, [2]Coombe Women and Infants University Hospital, Dolphins Bawn, Dublin 8, Ireland, [3]Royal College of Physicians Ireland, Kildare Street, Dublin 2, Ireland, [4]Univeristy College Dublin, Belfield, Dublin 4., Ireland

Introduction / Background

On 25 April 2018 Vicky Phelan won her high court action against the Health Service Executive (HSE) after being given incorrect smear test results in 2011 was the first in a series of events that led to what is now termed the Cervical Check controversy. In an effort to allay the fears of the women of Ireland the Minister for Health suspended the call and recall system and announced a free smear test to all women between the age of 25 and 60yrs of age.

In addition as the controversy unfolded it was confirmed that a number of smears has been misidentified as normal or low grade and the opportunity for early referral was delayed. This contributed to the concern among not only the women involved in screening but the smear takers too.

Referrals are divided into 'non-urgent' and 'urgent', depending on the clinical presentation and suspicion of malignancy. This group of women therefore accounts
for a significant proportion of patients seen in the colposcopy clinic.

Aims / Methodology

A retrospective review of all clinical indication referrals was undertaken
from 1 October 2017 to 1 October 2018 in the colposcopy service of a large tertiary referral centre. Data were collected from the colposcopy database 'Mediscan'. The time frame was included a six month period either side of the Cervical Check controversy.

Results

From October 2017 to April 2018 323 referrals for a clinical indication were seen. From May 2018 to October 2018 477 referrals for a clinical indication were seen. The equivalent figures for the same time frame for abnormal cytology were 619 and 538. The objective of the review is to determine whether there were any incidences of malignancy/insitu or high grade disease in this cohort of woman as it poses a significant burden on the colposcopy services to see these women within four weeks.

P – 52
Outcomes of Referrals with ?Glandular Neoplasia

Miss Deirdre Lyons, Dr Selina Chiu

Imperial College Healthcare NHS Trust, London, United Kingdom

Introduction
Abnormal cervical cytology - ?glandular neoplasia are uncommon, accounting for 0.05-0.1% of all samples and are associated with high prevalence of pre-invasive and invasive disease - 20-28% and 40-43% respectively.
NHSCSP 20 guidelines suggest all reports indicative of ?glandular neoplasia should have a written descriptive report indicating the likely source of abnormal glandular cells. Reliable diagnosis requires cylindrical shaped excisional cervical biopsy in order to ascertain and treat pathology. Women with suspected CGIN or early invasive adenocarcinoma, the extent of the cervical excision can be individualised depending on age and preferences on fertility conservation.

Aims/Methodology
A retrospective detailed analysis of all women referred to colposcopy with ?glandular neoplasia between 2000 – 2017 at Imperial College Healthcare Trust. This comprised 2 audits:
2000 – 2009 – 129 referrals
2010 – 2017 – 99 referrals
Data was collected from colposcopy database/regional reporting database.

Results
The total number of referrals received over 18 years was 24,000, and ?glandular neoplasia accounted for 0.95% referrals.
The majority of patients had site or origin delineated, the last 10 years being 100% identified. Pre-invasive disease accounted for 52.6% (HGCGIN 26.3%, HGCIN 16.2%, mixed 10.1%). Invasive disease represented 21% (18.4% adenocarcinoma, 2.6% was SCC). LGCIN/ benign was found in 26.4%. Overall, pre-invasive and invasive disease in this population accounted for 73.6%.
In 2000 – 2009, 12.4% had non-endocervical disease, whereas 4% were identified between 2010 – 2017. HGCGIN was also found to be increased in the last 8 years which would have been expected as non-endocervical disease, was investigated using the Rapid Access pathway.
Patients <36 years old only had cervical disease and associated with an increased prevalence of HGCGIN in comparison to those >36 years old, representing 48% and 27.4% respectively.

Conclusion
Results are in keeping with literature, identifying a high incidence of pre-invasive and invasive disease in referrals suggestive of ?glandular neoplasia.

P – 53

Shortage of Histopathologists: A Potential National Crisis for NHS and NHS Screening Programmes. Prediction from Colposcopy KC65 data

Ms Uma Krishnamoorthy, Dr Mayurika Sinha, Mrs Tammy Waddington

East Lancashire Hospitals NHS Trust, Burnley, Lancashire, United Kingdom

Background

Royal College of Pathologists survey in 2018 found only 3% of NHS histopathology departments that responded had enough staff.
BBC report on this, concluded patients were facing delays in diagnosis because of severe shortages among pathology staff.
RCPath standards recommend 90% of biopsies should be reported within 10 days.
NHSCSP document20 recommends that more than 90% women should be communicated regarding results within 4 weeks and 100% within 8 weeks.

Aims and Objectives

To minimize patient anxiety and enhance quality of care through ensuring timely communication of biopsy results.
To evaluate time taken to report/authorize histopathology and further evaluation of those who did not meet standards.

Methodology

Retrospective review in quarter ending December2018 of patients identified from KC65PartC2 – who had punch/excision biopsies and Part D-Interval between biopsy to results being communicated.
ICE system &Compuscope review resource were analysed (N= 300)

Results

176punch biopsies and 124excision biopsies performed in this quarter (N=300).
Results communicated in<4 weeks in 237(79%) and not communicated in<4 weeks in 63 (21%).
290 overall (96.6%) had results communicated in<8 weeks against standard of 100%.
Where results communication took>4weeks(N=63), average time for notification was42.8 days
Only 6% of patients in this cohort of 63 had histology authorized within 10 days against RCPath standard of>90%.
Average time for histology authorization was24 days(range5-43)

Conclusions

There is scope to improve compliance with RCPath &NHSCSP20standards.
Due to staff shortages, Histopathology department is using online backlog reporting.
Increase in substantive consultants is identified as high priority area that needs solution for long term sustainability. Further project in progress, to identify additional contributory factors if any such as secretarial/administrative/colposcopists delays in reviewing results.

P – 54
Vaginal Small Cell Carcinoma- as Rare as Hen's Teeth, a Case Report

Dr Gunther Von Bunau, Dr Nikita Deegan, Dr Sarah Petch

Tallaght University Hospital, Dublin, Ireland, Dublin, Ireland

Neuroendocrine tumours (NETs) can arise anywhere in the body, but are most commonly associated with the gastrointestinal tract, pancreas and lung. Small cell carcinomas are a subset of poorly differentiated NETs. Only 5% of these occur outside the lung, and small cell carcinomas of the genital tract are extremely rare. These are aggressive tumours and are associated with a poor prognosis.

We present the case of a 74 year old Para 5 lady who was referred by her GP to gynaecology out patients with a four week history of post-menopausal bleeding. She had had a total abdominal hysterectomy 35 years previously for menorrhagia. Her background history is significant for chronic kidney disease, type 2 diabetes, giant cell arteritis, diverticular disease, depression, ischaemic heart disease, hypertension and hypercholestrolaemia.

On examination she had a 3cm fungating and bleeding mass on her right vaginal wall. A biopsy was taken in clinic and she was admitted for a CT TAP and MRI pelvis.
MRI showed a 3 cm right vaginal wall locally invasive mass lesion abutting the urinary bladder and rectum however no invasion of these structures identified. CT TAP showed no evidence of distant metastases. Estimated disease stage TII N0 vaginal carcinoma. Histology showed a neuroendocrine carcinoma of small cell type.

The patient was discussed at a Gynaecology Oncology MDT and was referred on for chemotherapy. She is currently three months post diagnosis and doing well

P – 55
Rare Case of Serous Cells Carcinoma of the Cervix

Mr Mohammed Abdullah, Mr Arabinda Saha

Diana Princess of Wales Hospital Grimsby, Hull, United Kingdom

Introduction / Background
Serous carcinoma of the cervix is a rare histological variant of cervical adenocarcinoma with a very small number of case reports; it is aggressive and usually diagnosed at advanced stages.
It accounts 10-20% of the invasive carcinoma of the cervix. This type of carcinoma unfortunately is poor radio-chemotherapy sensitive.

The most suitable treatment option depends on staging of the cancer and MDT advice but in general, if in early stages the ideal treatment would be surgery followed by radiotherapy, while in late stages has been treated with chemotherapy with radical surgical treatment.

Aims / Methodology
Case report aiming to highlight this rare type of cervical cancer for educational and learning purposes

Results
A 53 year old British female who is fit and healthy, referred to colposcopy due to query glandular cell in her routine cervical screening test. Patient was a symptomatic and was very with her cervical smears and they always been normal.

Colposcopy performed and cone biopsy was taken which later on showed query serous carcinoma. MRI suggested StageIIb cervical cancer as there was invasion to the parametrium. MDT recommendation was for PET CT scan to assess metastasis. PET CT scan showed no lymph nodes involvement or any distal metastasis.

Patient then had radical hysretectomy, bilateral salpingo-oophorectomy, lymph node dissection and infracolic omentectomy. Histology confirmed stage IIIc serous carcinoma of the cervix and the patient recovered well from the surgery. MDT suggested chemotherapy treatment to be followed by radiotherapy. Patient is still currently under chemotherapy treatment and the plan to be followed by radiotherapy.

P – 56

The Effect of Human Papilloma Virus (HPV) vaccination on Women of 26 years of age and under

Miss Eve Allen, Mr James Hill, Mrs Sheryl Shutt

Kings College London, London, United Kingdom

Introduction / Background

Cervical Cancer is the second most common cancer in women. HPV is responsible for 99% of cervical cancers with HPV types 16&18 responsible for most. HPV vaccination for types 16&18 started in 2008 in girls aged 12-13 and catch up for girls 16-17. It is expected that by 2018, 10 years later, we should see an effect on new patient referrals, when vaccinated girls present for their first smear**.**

Aims / Methodology

The aim of the Audit is to look at the effect of HPV vaccination on the rate of cervical abnormalities in the aged under 26 population attending for first smear at The Princess Royal University Hospital.

A retrospective audit of new referrals between 2008-18 was performed using the MEDISCAN electronic record system. The referral smears, the number of new referrals per year, age of first smear, biopsy diagnosis and cancer rate were recorded.

Results

In 2008-2009 80.1% of girls had full HPV vaccination in Bromley. In the 10year study period 16,136 patients were seen in the colposcopy clinic. 1653 were excluded as they were referred for a clinical indication and had a normal smear. The number of referrals peaked in 2013. The latest figures for 2018 show a 38% reduction in referrals for the under26 age group. However, the reduction in this group of women was most marked in high grade smears showing a 71% reduction. Only 1 case of cervical cancer occurred in the under 26 age group.

2018 was the first year in which a clear reduction in both low & high grade referrals occurred. This suggests a positive effect of the vaccine. Although these results are encouraging high grade smears will continue to occur as only 80% of girls are vaccinated and there are other types of high-risk HPV that cause cervical abnormaliti

P – 57
Changing Trends in Women under 25 years Referred to Colposcopy

Miss Gulnaz Majeed, Dr Nikki Lee, Dr Anna Kusi

GSTT, London, United Kingdom

Background
NHSCSP recommends cervical-screening should commence after 25 years of age as screening is not effective below that age. There is more potential for harm in terms of anxiety, high prevalence of HPV, low grade abnormalities, referral to colposcopy and over-treatment. The treatment may itself increase the risk of mid trimester-miscarriages and preterm-labour. In addition, its almost 10 years since the implementation of HPV immunisation which is expected to reduce the incidence of abnormal cytology.

Aim and Objectives
To review number of women referred to colposcopy under 25 years of age with abnormal cytology and clinical indications over the last 3 years.

Methodology
Identification/data collection from colposcopy database Viewpoint from August 2014 to Dec 2014 compared to August 2015-Dec 2015/Aug 2016-Dec2016/Aug 2017-Dec2017/Aug 2018-Dec2018.

Results:
Patients referred to colposcopy

	2014	2015	2016	2017	2018
Total number	(n = 154/1176) 13%.	(n=71/1302) 5.4%	(n=78/1223) 6%	(n=90/1180) 7%	(n=79/1170) 6.6%
Abnormal cytology	(n=99) 64%	(n=55) 77%	(n=44) 56%	(n=33) 36%	(n=24) 30%
Clinical indications	(n=42) 26%	(n=16) 23%	(n=34) 44%	(n=57) 64%	(n=55) 69%
LLETZ	n=9	n=7	n=2	n=2	n=0
HPV Vaccination	n=8 (5%)	n=13 (18%)	n=17 (22%)	n=20 (22%)	n=20 (25%)
Cold Coagulation	n=10 7%	n=2 3%	n=2 3%	n=0	n=4 5%

Conclusion:
Total number of referrals under 25years of age have reduced from 13% (2014) to 6.6% (2018). Referrals for abnormal-cytology reduced from 8.4% (Aug-Dec 2014) to 2% (Aug-Dec 2018 whereas referral for clinical indications increased from 3.5% (2014), 4.7% (2018). Number of excisional treatments reduced.
None of the patients had cancer and therefore should be referred per DOH Clinical Practice Guidance Assessment of Young Women aged 20-24 with abnormal bleeding to colposcopy

P – 58
Developing Trends in Referrals to Colposcopy Unit at GSTT

Miss Gulnaz Majeed

GSTT, London, United Kingdom

Background
Guys-and-St-Thomas-NHS-Foundation-Trust is the largest colposcopy-unit in London and third-largest in England. As young-women who had HPV-immunisation reach screening-age there referral trends for both direct/clinical-indications are changing.

Aims & Objective
To look at the trends of change in referrals/underlying pathology. Plan and deliver high quality colposcopy service efficiently.

Methodology
Referrals to colposcopy unit both direct and clinical indications were identified using colposcopy database Viewpoint, colposcopy-scorecard and cyres over four years (2014-2018). Histology with subsequent treatment was reviewed.

Results
Total referrals increased from (2015) n= 2852 to n=2950 in (2018). However abnormal cytology reduced from n=1657 (2015) to n=1537IN (2018) at the same time clinical indications including (others) increased from n=1195 in (2015) to n=1413 in (2018). CINIII reduced from n=172 (2015) to n=121 (2018), LLETZ procedures reduced from n=479 (2015) to n=266 in (2018). There were 38 cancers over four year period only one was detected via clinical-indication. Number of Cancers n=8 in 2018 to n=11 in 2017.

Conclusion
Colposcopy-referrals have increased over the last four years. Main increase is due to clinical-indications only 1 cancer was detected. Prevalence of precancer is decreasing which may be due to primary prevention by HPV immunisation as these vaccinated young women are screened. Excisional treatment has almost halved as more young women with CINII are managed conservatively n=197 in 2015 vs n=81 in 2018.

Recommendations
GSTT colposcopy-Unit is holding educational meetings for GPs advising about appropriate referrals for women with clinical indication especially through electronic referral system. VTS trainees are exposed to colposcopy-clinics during their training to identify physiological/pathological changes in cervix. An audit of clinical indications is being undertaken via Pan-London-Colposcopy-group. With introduction of Primary HPV screening three trainees are currently under training to meet the challenges. Each Gynae-oncologists conduct one clinic a month and a unit-lead will conduct a clinic per wee

P – 59

Increased Detection of Cervical Intraepithelial Neoplasia (CIN) by Electrical Impedance Spectroscopy (Zedscan) in a Service Evaluation at Royal Bournemouth Hospital

Ms Padma Eedarapalli

Royal Bournemouth Hospital, Bournemouth, United Kingdom

Introduction / Background

As the prevalence of disease (CIN2+) falls it reduces the performance of colposcopy. Adjuvant technologies may help with increased detection of CIN2+. Proposed primary hrHPV screening will lead to new pathways in colposcopy increasing referrals to colposcopy, affecting clinic capacity.

Aims / Methodology

To establish the performance of colposcopy with EIS (ZedScan) in women referred to colposcopy. A prospective cohort study of women undergoing both colposcopic and ZedScan examination at a single colposcopy clinic. ZedScan detects changes in tissue impedance indicative of dysplasia which are independent of aceto-white change.

Results

69 patients underwent both colposcopic and ZedScan examinations between July and November 2018. The referral population included HG cytology 24 (34.8%), LG/Borderline cytology 37 (53.6%), 24 (34.8%) cases of HG disease (CIN2+, HGCGIN) were found, 19 (79.1%) cases associated with HG cytology and 5 (20.8%) with LG/Borderline cytology. ZedScan detected 23/24: sens 95.8%. Colposcopy detected 21/24: sens 87.5%. An additional 3 cases of high-grade disease were identified by ZedScan where CI was normal or low-grade (14.3%). 3 women underwent ‘See and Treat’; CIN2+ was confirmed in 100% of the cases. ZedScan identified a further 2 patients for S&T who were also confirmed positive following Bx. ZedScan and colposcopy agreed on 22 patients with no disease; 5 underwent biopsy, all of which were negative: NPV 100%.

The use of ZedScan in routine colposcopy practice increases the detection of CIN2+. ZedScan increases the opportunity to treat at first visit due to PPV100%, reducing the need for follow up and multiple diagnostic biopsies, for improved health economics.

ZedScan identified additional cases of disease in high-grade and low-grade referrals which would have been missed by colposcopy alone. See and Treat can be performed with a high PPV in conjunction with ZedScan. Diagnostic biopsies can be avoided where ZedScan indicates treatment at first visit. Reduction in follow up appointments increases capacity for new referrals.

P - 59

DYSIS Colposcopy vs DYSIS Map. What is the Rate of Variation in Findings in Women with Low grade Cytological Abnormalities?

Mr Tarang Majmudar, Miss Hema Nosib, Mrs Ewa Bak, Mrs Lynn George

Hinchingbrooke Hospital, North West Anglia NHS Trust, Cambridge, United Kingdom

Introduction / Background

DYSIS was introduced as adjunctive technology to the colposcopy unit at Hinchingbrooke hospital in November 2017. The aim of this study was to assess the impact on clinical practice of introducing this new technology.

Aims / Methodology

152 women with low grade cytological abnormalities between December 2017 and 2018 were seen by a total of 4 colposcopists. Data was collected and retrieved from electronic databases.

Results

We noted a non-concurrence between DYSIS colposcopy and DYSIS map findings in 38.8% women. Non-concurrence rates varied from 22% - 50% amongst individual colposcopists. It is unknown whether these rates of non-concurrence are related to adapting to a new technology. We observed that as a result non-concurrent findings, decision making on clinical management was trickier.

The commonest discrepancy was LG disease on DYSIS colposcopy versus no abnormality on DYSIS map amounting to 57.6% of all discrepancies. Another 8.5% had normal findings on DYSIS colposcopy and LG disease on DYSIS map. These women did not have/need biopsies and it is not possible to state is these women had confirmed LG disease. All these patients were advised a cautious 12 month recall but it could be argued that these women could have been discharged to routine recall. We intend to follow their outcome over the next 3 years to assess for disease progression.

LG disease on DYSIS colposcopy vs HG on DYSIS map accounted for a further 25.4% of discrepancies. 26.7% of these did not have biopsies due to low volume disease. Of the remaining, majority had normal/LG disease on biopsies with only 17% having HG disease in this group.

Conclusion

Following introduction of DYSIS to clinical practice, local guidelines should be adapted to address these issues of non-concurrent findings between Colposcopy and DYSIS map to reduce variations in practice

P – 60

The use of Rapid Evaporative Ionization Mass Spectrometry (REIMS) in the Identification and Classification of Cervical Cytology Samples

Dr Maria Paraskevaidi, Dr Simon Cameron[1], Dr Eilbhe Whelan[1], Dr Menelaos Tzafetas[1], Dr Anita Mitra[1], Dr Sarah Lever[1], Dr Anita Semertzidou[1], Prof Zoltan Takats[2], Dr Maria Kyrgiou[1]

[1]Department of Surgery and Cancer, Imperial College London, London, United Kingdom, [2]Computational and Systems Medicine, Imperial College London, London, United Kingdom

Introduction / Background

Cervical cancer is the 4th most common cancer among women and is preceded by a long phase of precancerous lesions known as cervical intraepithelial neoplasias (CIN). Currently, microscopic examination of cervical cells is carried out to screen asymptomatic women. However, this approach is prone to human error and can lead to high numbers of false-positive and false-negative results. These falsified results are responsible for the generation of patient anxiety as well as an increased burden on the NHS. These factors reflect the crucial need for a better primary screening test.

Rapid evaporative ionization mass spectrometry (REIMS) is an innovative technique that allows interrogation of biological samples, such as tissues and biological fluids, without any need for laborious sample preparation. Previous work has demonstrated the efficacy of REIMS in differentiating healthy from cancerous tissue.

Aims / Methodology

The main objective of this project was to establish whether REIMS can be employed for the accurate detection of invasive cancer and pre-invasive cervical changes using liquid-based cytology (LBC) samples as well as to assess the accuracy with which the different grades of CIN (CIN1, CIN2 and CIN3) can be distinguished.

During REIMS, laser energy is directed to the sample of interest and rapid heating results in a vapour containing gas phase ions. The generated ions are introduced into a spectrometer and a mass spectrum with molecular information is subsequently produced.

Results

We have shown that REIMS can predict the presence and grade of disease with higher accuracy than current cytology. Being able to detect and accurately stratify pre-cancerous conditions and cancer using non-invasive and real-time technologies would be of huge clinical and patient benefit. Using automated, label-free techniques would reduce cost and prolonged waiting times as well as provide a more objective diagnosis by eliminating human interpretation.

P – 61

The Psychosexual Impact of Testing Positive for High-risk Cervical Human Papillomavirus (HPV): A Systematic Review

Miss Kirsty Bennett, Professor Jo Waller[1], Miss Mairead Ryan[1], Dr Julia Bailey[2], Dr Laura Marlow[1]

[1]Cancer Communication and Screening Group, Department of Behavioural Science and Health, UCL, London, United Kingdom, [2]e-Health Unit, Department of Primary Care and Population Health, UCL, London, United Kingdom

Introduction / Background

Using primary HPV testing in cervical screening increases sensitivity and several countries have implemented, or plan to implement it soon. Because HPV is sexually transmitted, there may be psychosexual consequences of testing

Aims / Methodology

This review aimed to explore the psychosexual impact of testing positive for high-risk cervical HPV. MEDLINE, PsycINFO, CINAHL Plus, Web of Science and EMBASE were searched in January 2019. No study design or date limits were applied to the search and both qualitative and quantitative papers were included. We extracted data using a standardised form and a quality assessment was carried out for each article. We conducted a narrative synthesis for quantitative studies and a thematic synthesis for qualitative studies.

Results

Twenty-two articles were included. Quantitative studies (n=11) reported an overall psychosexual impact score and/or specific psychosexual outcomes (e.g. sexual satisfaction, sexual pleasure, frequency of sex). Outcome data were collected at different time points and measures varied between studies. Most quantitative studies provided evidence that testing HPV+ has an overall psychosexual impact. For studies reporting specific psychosexual outcomes the evidence was mixed. A thematic synthesis of the included qualitative studies (n=11) identified three major themes: (1) Source of HPV infection (2) Transmission of HPV and (3) Impact of HPV on relationships.

Implications

The results of this review suggest that testing HPV+ can have an impact on various aspects of psychosexual functioning. With the changes to cervical screening programmes over the coming years, it is important to evaluate the information that is currently provided to women to ensure that it is clear and meets their information needs.

Conclusions

It appears that, for some women, testing HPV+ has a psychosexual impact, but limitations of the papers included in the review made it challenging to draw conclusions about the prevalence and severity of this impact. Future research should aim to address these limitations.

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Psychosexual Implications of Routine Primary Human Papillomavirus (HPV) Testing in the English Cervical Screening Programme

Miss Kirsty Bennett, Professor Jo Waller, Emily McBride, Dr Alice Forster, Dr Laura Marlow

Cancer Communication and Screening Group, Department of Behavioural Science and Health, UCL, London, United Kingdom

Introduction

Primary HPV testing is being implemented in several countries. This will change the cervical screening results women receive. Because of the sexually transmitted nature of HPV, there may be psychosexual consequences of testing positive for the virus.

Aim / Methodology

This study aimed to assess psychosexual impact among women receiving different HPV and cytology results from five sites in England where primary HPV testing has been introduced. Psychosexual burden was assessed using six items from the Psychosocial Effects of Abnormal Pap Smears Questionnaire (1) around two weeks after women received their screening result. Variation in overall psychosexual impact and the proportion reporting psychosexual distress by each individual item were compared across six groups (HPV-, HPV+ with normal and abnormal cytology, HPV persistent and HPV cleared following 12-month follow-up and a cytology only control group) using ANCOVA, chi-square tests and logistic regression.

Results

Psychosexual impact differed across the six groups ($F(5,814)=39.95$, $p<0.001$) and was highest among women who were HPV+, irrespective of cytology result ($\overline{X}=2.32$, SE=0.11 for HPV+ with normal cytology; $\overline{X}=2.32$, SE=0.12 HPV+ with abnormal cytology and $\overline{X}=2.24$, SE=0.12 for persistent HPV at 12-months). Psychosexual impact did not differ between women who tested HPV- ($\overline{X}=1.35$, SE=0.12) and the control group who were not tested for HPV ($\overline{X}=1.31$, SE=0.11, $p=1.00$). Percentage distressed was lowest among the control group (range across 6 items: 0.2-1.3%) and highest among women who were HPV+ with normal cytology (range 16.5-31.0%). Percentage distressed differed significantly between the control group and all three HPV+ groups for all items (all $p<0.001$).

Conclusions

The findings of this study suggest that while HPV testing does not appear to have a psychosexual impact, receiving an HPV+ result does, at least in the short term. It is important to understand and minimise this psychosexual burden and ensure this does not cause undue concern for women, have an adverse effect on their relationships, or influence future screening re-attendance.

P – 63
A Novel Patch Sampling Approach for Grading and localising Cervical Lesions

Dr Mohamed Aslam Shiraz, Mr Robin Crawford, Dr Nagayasu Egawa, Professor John Doorbar

Cambridge University Hospitals, Cambridge, United Kingdom

Introduction / Background
Screening for cervical cancer/ precursors can be facilitated by the detection of HPV DNA. Multiple studies have demonstrated the higher sensitivity of this approach to HSIL. However primary HPV screening has a low PPV on its own thus leading to an increase in the number of women that are referred to colposcopy with LSIL. This stems from the fact that mere presence of DNA doesn't indicate malignant disease. Furthermore, an increase in referrals to a subjective procedure like colposcopy may lead to unnecessary treatment and its associated consequences.

Aims / Methodology
We utilise a novel patch sampling approach to obtain the surface cells of the cervix (including the transformation zone), while preserving their spatial positions. Patients attending colposcopy had a pre-& post-acetic acid application photo, interspersed by patch sampling. 15 patients with a high-grade smear and then histology proven HSIL were recruited in one arm vs. 16 patients with LSIL. This patch was then probed with antibodies to the E4 protein (LSIL marker) and p16/MCM (HSIL). The signal for each antibody is then analysed using a machine-learning approach in order to generate a cervical heat map which shows lesion position and corresponding severity.

Results
Our novel approach can safely sample the cells at the surface of the cervix and be probed with biomarkers. Our system can identify clusters of cells that are p16/MCM positive and reveal the presence of underlying HSIL, while E4 clusters indicate the presence of underlying LSIL. These lesions were successfully correlated with the underlying histological diagnosis. At final analysis the sensitivity of our approach was 88% (comparable to p16) but our PPV was 87%, which is the highest in comparison to conventional testing e.g. cytology or methylation testing.
Thus, our approach, once validated on a larger cohort would perhaps be a superior triage method for HPV positive women.

P – 64
Factors Associated with CIN Treatment Outcome Failure.

Dr William Parry-smith, Mr Richard Todd[1], Mr Marc Arbyn[2], Mr Charles Redman[1]

[1]Royal Stoke University Hospital, Stoke-on-trent, United Kingdom, [2]Cancer Epidemiology Unit, Belgian Cancer Centre, Belgium

Introduction / Background
Multiple risk factors for CIN treatment failure have been suggested in the literature.

Aims / Methodology
Data was obtained from the Royal Stoke Hospital colposcopy database and Open Exeter system from 2nd April 2012 to 28th October 2016. After data cleaning and checks a total of 1099 treatments with follow-up information were available for analysis. Multivariate analysis of factors associated with treatment outcome were assessed by logistic regression, followed by a stepwise logistic regression. Notably smoking data was not available to include in the model.

Results
Stepwise logistic regression confirms the significant role of the cone length, transformation zone type and margin as risk factors for treatment failure.
Consideration of many elements rather than simple depth of excision and histology, should be considered when trying to identify those most at risk of treatment failure.

P – 65
Accuracy of Margin Status to Predict Treatment Failure.

Dr William Parry-smith, Mr Richard Todd, Mr Marc Arbyn, Mr Charles Redman

Royal Stoke University Hospital, Stoke-on-trent, United Kingdom

Introduction / Background
Excisional margin status has rightly been viewed as an important factor in colposcopy management. English guidance has however advocated that in the majority of cases positive margin status does not warrant further excision. A differential follow up policy based on incomplete excision is not recommended.
We wished to assess if margin status was useful to predict treatment failure.

Aims / Methodology
Data was obtained from the Royal Stoke Hospital colposcopy database and Open Exeter system from 2nd April 2012 to 28th October 2016. After data cleaning and checks a total of 984 treatments with follow-up information were available for analysis. A two by two table to calculate sensitivity and specificity with HPV status and cytology used as the disease endpoint definitions was produced.

Results
Excision margin free status occurred in 366 loops and excision margin positive in 618 loops. Margin status had a very poor specificity of 38% and intermediate sensitivity of 80% to predict treatment failure.
Margin status is less relevant than outcome following cervical treatment and should rarely be used to guide further treatment or predict outcomes.

P – 66

Assessing the Immediate Impact of the Introduction of Free Cervical Screening on Uptake in Jersey, Channel Islands

Dr Jade Wright, Dr George Moore

Jersey General Hospital, St Helier, Jersey

Introduction / Background

Jersey is a Channel Island with a population of approximately 110,000. In Jersey, primary care is private; patients pay to be seen by General Practitioners (GPs), and thus women previously had to pay for cervical screening.

In August 2018, a campaign was introduced which made cervical screening free and was accompanied by a social media campaign.

This study aims to evaluate the outcome of this campaign, and whether it has resulted in increased uptake of cervical screening in women in Jersey immediately after introduction of free cervical screening.

Aims / Methodology

The number of smears sent to the laboratory between August 2017 and December 2017 were compared with the number sent between August 2018 and December 2018. This compares a 5 month period when cervical screening in primary care incurred a cost to the user, against 5 months after screening became free.

Results

Before the removal of cost-to-user, 2,132 smear samples were received. 1,293 (60.6%) of these were from smears done at GP, and 510 (23.9%) of smears were done at the community sexual health clinic. In August 2018 to December 2018, 2,594 smear samples were received. 1309 (50%) of these were from GP, and 622 (23.9%) were from the sexual health clinic. 462 more smears were sent in the period studied of 2018 than 2017.

In the immediate period following free access for cervical screening, there has been an increase of smears received by 21% from previous. This demonstrates the impact of a financial barrier to women accessing cervical screening. However, despite this barrier being removed, uptake of smears in Jersey is not universal; this highlights the role of other barriers in accessing cervical screening within a health-resource rich area such as Jersey, and indeed the UK, and these require further investigation to evaluate and address them.

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The Outcome of Primary Care Fast Tract Referral with Suspicion of Vulval Cancer to the Secondary Care Gynaecology Rapid Access Clinic

Mr Oudai ALI, Mrs Caroline Bell, Mrs Veitch Corene

West Cumberland Hospital, Cockermouth, United Kingdom

Introduction / Background

Experience vulval disorders is an integral part of clinicians and professionals working in colposcopy and rapid access clinics to exclude gynaecology cancers. This is the current tradition rather than referrals to the dermatologists. This is a retrospective study of the new referrals with suspicion of vulval cancer from April 2014 to April 2018 to the rapid access clinic at Whitehaven. The reason for referral can be itching, pain, lesion/ulcer, and vulval lump.

Aims / Methodology

The study is to assess the value of the referral to detect cancer or precancer. The log of the rapid access referral was analysed in the 4-year duration and all referrals with suspected vulval cancer were studied regarding patient characteristics, symptoms, examination findings, and final outcome. All the referral were seen by one team under one consultant with colposcopy examination and on occasions biopsies.

Results

Vulval reasons were 62 of the total referrals 1350 (4.6%) to the rapid access. The symptoms of referral were itching (35.5%), Pain (12%), lump (28%), lesion/ulcer (27%), other symptoms included postcoital bleeding, dyspareunia and postmenopausal bleeding. The symptoms could be combined. There were 5 cancers (4 squamous, one sarcoma) and 8 precancer (VIN) picked by the clinic. The pick-up rate for diagnosing cancer or precancer was 4.7;1. Other conditions were non-specific vulvitis (32.3%), lichen sclerosus (27.4%), The rest are lipoma, infection, herpes and benign conditions.
In conclusion vulval referrals to one stop diagnostics with the use of the colposcope has good cancer pick rate.

P – 68

A Study of HPV Cervical Screening in HPV Immunised Women as First Test (SHIFT)

Professor Maggie Cruickshank, Ms Jiafeng Pan[2], Dr Seonaidh Cotton[1], Professor Chris Robertson[2], Dr Louise Smart[3], Dr Sarah Liptrott[4], Dr Camille Busby-Earle[5], Mrs Judith Wilson[3], Professor Heather Cubie[5], Dr Kim Kavanagh[2], Dr Kate Cuschieri[5]

[1]University Of Aberdeen, Aberdeen, United Kingdom, [2]University of Strathclyde, Glasgow, UK, [3]NHS Grampian, Aberdeen, UK, [4]NHS Lanarkshire, UK, [5]NHS Lothian, Edinburgh, UK

Introduction / Background

Women vaccinated with the bivalent HPV vaccine as part of the catch-up programme started to enter the Scottish national cervical screening programme at age 20 from 2010. From 2020, primary HPV screening will be implemented but little is reported on performance in HPV immunised women.

Aims / Methodology

To compare the performance of cytology and high-risk (HR) HPV testing to screen women in the vaccinated cohort.

HPV DNA testing was applied to residual LBC samples from women in the HPV immunisation catch-up cohort when they attended for first cervical screen in Scotland using a clinically validated HR-HPV test (Hybrid Capture 2 test, Qiagen Gaithersburg, MD, USA). Women with high and low grade dyskaryosis were invited for colposcopy as routine practice. As part of the "SHIFT" (**S**cottish **H**PV **i**n women attending for **F**irst **T**ime smear) study, HR-HPV positive women with BNA or normal cytology, were also invited. Outcomes used routinely collected data from national colposcopy (NCCIAS) and national cervical screening (SCCRS) databases. These data were linked to HR-HPV result and HPV vaccine status.

Results

8092 women aged 20-23 years attended for first cervical screen with HR-HPV testing performed from 2012-2015. This analysis includes 1439 women who attended colposcopy. 69.4% women completed 3 doses of HPV vaccine; 8.9% 1-2 doses and 21.7% had not been vaccinated. 93% of these women were carrying HR-HPV, irrespective of vaccine status. 184 cases of CIN2+ and 53 cases CIN3+ were identified. The positive and negative predictive values of hrHPV testing were 14.3% and 98.8% compared with cytology (cut-off high grade dyskaryosis) which were 71.6% and 82.9%.

Implications

HR-HPV testing had a high negative predictive value but with low positive predictive value which impacts on colposcopy provision. These early data support the need to review screening and referral to colposcopy in the HPV immunised cohort.

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VACCept Survey Study to Understand the Knowledge and Acceptability of HPV Vaccination to Women in England aged 30 to 45 years and Eligible for Cervical Screening.

Miss Louise Cadman, Mrs Lorna Sutcliffe, Ms Janet Austin, Mr Tony Hollingworth, Mrs Lesley Ashdown-Barr, Professor Jack Cuzick

Queen Mary University of London, London, United Kingdom

Introduction

It has been proposed that offering women aged 25 to 45 years HPV vaccination could be beneficial. In particular in countries unable to establish successful cervical screening programmes. However, uptake may not be high where women have a trusted screening programme. Vaccination could result in a reduction in lifetime screenings that a woman has to undergo. However, success would depend on women accepting vaccination. VACCept aimed to explore knowledge of HPV vaccination in women in England and whether they would take up the offer of vaccination. Findings from VACCept were included in the pan-European CoheaHr project comparing health services interventions for the prevention of HPV-related cancer.

Methods

Women aged 30 to 45 years attending for routine cervical screening within General Practices in England were invited to complete the online anonymous VACCept Survey between September and December 2017. Preliminary analyses were carried out using STATA 13.

Results (preliminary)

253 general practices enrolled in the study. Of the 757 survey responses collected 323 were excluded (no consent (2), ineligibility (321)) and 434 representing 136 general practices were analysed. Mean age was 37.62.

343 (79.03%) had heard of the HPV vaccines and 314 (72.35%) agreed that they prevent cervical cancer. 417 (96.08%) would accept vaccination if offered. Of the 17 women who would not, 11 (64.71%) were concerned about safety, 3 (17.65%) do not like vaccines, 6 (35.29%) do not think that they would benefit, 3 (17.65%) would need to consult others first and 13 (76.47%) required more information.

Conclusion

Although England has a successful cervical screening programme a significant number of women who completed this survey would accept HPV vaccination if offered to them. There remain concerns around safety and although 79.03% of women had heard of HPV vaccination more information is still required in this group.

P – 70
A Case Report: Misoprostol, the Key to the Stenotic Cervix

Dr Nicola Ramshaw, Sister Jilly Goodfellow, Mr Gordon Narayansingh

Royal Victoria Infirmary, Newcastle, United Kingdom

Introduction / Background
A 25 year old nulliparous female was referred with a low grade/high risk HPV positive index smear.

Aims / Methodology
In July 2017 her cervical sample showed high grade dyskaryosis despite all previous colposcopic biopsies showing CIN 1. Therefore it was recommended that she undergo a treatment loop biopsy. She underwent a medium central loop biopsy and four peripheral punch biopsies. All showed CIN1. Six month test of cure cervical smear showed low grade dyskaryosis and was high risk human papillomavirus (HPV) positive. Surprisingly subsequent colposcopy demonstrated a flat cervix and it was not possible to even identify the external cervical os. A repeat colposcopy under paracervical block was also unsuccessful.

Results
A decision was made to prime the cervix with misoprostol 400mcg vaginally two hours prior to procedure. This proved successful and the cervical canal was adequately visualised. Cervix appeared normal and no biopsies were required. A repeat colposcopy and cervical sample has been arranged in one year.
Education point: Misoprostol is well established for cervical dilatation in gynaecology. Rapid and marked stenosis following a loop biopsy is not a common occurrence and therefore misoprostol is seldom used in this scenario. However, our case highlights that misoprostol is an effective treatment strategy.
We recommend that this strategy should be considered when faced with similar colposcopic challenges. It is essential for Colposcopists to be aware of different options available to allow adequate visualisation of the stenotic cervix and therefore safe onward management these patients.

P – 71

A Standardized and Systematic Approach to Counselling Women who Attend the Colposcopy Clinic – How to do it best?

Mr William Parry-Smith, Mr Mohamed Shahin, Dr Fatima Elgizawy, Dr Amy Lovett

NHS, Stoke on Trent, United Kingdom

Introduction / Background

Women experience high levels of anxiety and negative emotional responses at all stages of cervical screening. High levels of anxiety before and during colposcopy can have adverse consequences, including pain and discomfort during the procedure and high loss to follow-up rates.

In a study to assess emotional responses of women attending a colposcopy clinic for investigation of abnormal cervical smear, it was found that further investigation by colposcopy is generally associated with low levels of anxiety and depression.

Galal et al, found no difference between anxiety levels prior to colposcopy in women receiving information leaflets, video and counselling or not, and it was not established whether any of the interventions at the time of colposcopy lead to significant reduction in anxiety levels [(3)]. This highlights the importance of the quality rather than quantity of information shared with patients.

Although information leaflets did not reduce anxiety levels, they did increase knowledge levels and are therefore useful in obtaining clinical consent to the colposcopic procedure. Leaflets also contributed to improved patient quality of life by reducing psychosexual dysfunction [(2)].

Aims / Methodology

We looked into standardising the quality of information shared with the patients during colposcopy counselling. To achieve this aim, information leaflets and available counselling resources were checked and patterns of good practice counselling were identified and refined to create a standardized template.

Results

A standardised and step-wise counselling approach is created using a logical and systematic technique of information sharing. This allows the information shared with the patients and reassurance to be conveyed without compromising information gathering. Also, this will hopefully facilitate better education and training among colposcopy trainees.

P – 72
Emerging Technologies to Facilitate the BSCCP Recertification Process in Colposcopy

Mr Nikolaos Plevris

Private Practice, Athens, Greece

Introduction
Health service include the use of simulators during residency, and educational resources. In colposcopy, implementation and integration of digital methodologies could help audit medical practice and performance. The DYSIS digital colposcope with its cervical map supports clinical decisions and increases high-grade lesion. DYSIS maintains a standardized and detailed record for each colposcopic function as a detailed patient note folder. Following its recent incorporation in the NHSCSP Doc20 guidelines and its NICE recommendation, further uses can now be explored.

Aim/Methodology
Colposcopists thattrained in the NHS and completed their BSCCP accreditation working overseas. This poses difficulties to comply with the BSCCP recertification process. BSCCP requires from each member to complete 50 new colposcopy cases in a continuous 12-month period, with at least 25 of them having an abnormal screening result. We propose to examine the use of the DYSIS patient record system recertification of BSCCP-accredited doctors practicing overseas.

Results
The DYSIS ULTRA digital colposcope was installed in this private practice in Athens, Greece. Apart from our experience that is aligned with the literature on successful findings, we provide the BSCCP with competent, detailed and consistent notes of colposcopy exam, together with the image record that includes the entire acetowhitening image sequence for each patient, for expert review.

Implications
The adoption of such a system would help many physicians maintain their accreditation and eventually their interest and competence in colposcopy.

Conclusions
This practice could readily serve the recertification processes of BSCCP-trained colposcopists with minimal cost, and in the future, the documentation process could serve, if not for tele-diagnostic purposes, definitely as part of an international expert opinion seeking process.

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Establishing a Cervical Health Clinic at The Royal London Hospital

Dr Rebecca Gibbs, Mrs Anna Parberry

The Royal London Hospital, London, United Kingdom

Aims / Methodology
With the advent of Primary HPV Screening, The Royal London Hospital is expecting an estimated 80% increase in colposcopy capacity requirements over the next three years. Will creating a new clinic for non-cytological referrals (working title: Cervical Health Clinic) provide a novel way of managing these patients whilst releasing capacity for new NHSCSP referrals?

An audit in January 2019 established that in Q3 of 2018 408 new patients were referred, of which 113 (27%) had a reason for referral outside of the NHSCSP. Reasons included post coital bleeding (24% of non-cytological referrals), an abnormal appearance of the cervix, and cervical polyps. Non-cytological referrals are subject to a 62-day pathway, rather than the 2 week for severe or 6 week for mild dyskaryosis of NHSCSP patients. The majority of patients required a single visit to a colposcopy clinic; however CIN was identified in 6 patients who were referred to colposcopy with a non-cytological indication, of which two required a LLETZ. Several patients had non cervical reasons for their symptoms.

The first scheduled session for this new clinic, initially to run fortnightly, will be on 8th February 2019. It will be staffed by a Colposcopist and a Healthcare Assistant. It will aim to provide a one stop service, with the ability to follow up in gynaecology clinic or colposcopy clinic if required. If it is a success it will run weekly and potentially free up 116 new patient appointments for patients referred from the NHSCSP.

Results
The data from the first three months of the Cervical Health Clinic will be available for presentation at the BSCCP 2019 Annual Scientific Meeting.

P – 74
Which Patients with cin2 should be Managed Conservatively?

Dr Abigail Sarah Johnson, Mr Paul Barrett, Mr Partha Sengupta

County Durham And Darlington Nhs Foundation Trust, County Durham, United Kingdom

Introduction / Background
CIN2 has previously been managed as CIN3 with treatment by a standard Loop procedure. Treatment by this method is associated with negative effects, including late miscarriage and pre-term labour. New evidence suggests that CIN2 can be managed conservatively as approximately half of these lesions will regress and not require treatment. However, there is a risk that some lesions will progress and invasive cancer may develop in untreated cervices. This study evaluates the County Durham and Darlington Foundation Trust experience of standard and conservative management for CIN2 and investigates differences in the demographics of both groups.

Aims / Methodology
An audit of CIN2 management was conducted retrospectively including patients managed by standard loop excision from 1st January 2014 until December 31st 2014 using the BSCCP document 20 guideline as a standard.
In the following year, the trust began conservatively managing CIN2. Data is retrospectively collected to determine outcome. Differences in patient demographics between those managed with standard treatment and those managed conservatively are analysed to inform development of guidance.

Results
75 patients underwent Loop excision treatment for the management of CIN2 in 2014. 17 patients underwent conservative management in 2015. Conservative management was successful in 16/17 patients and no patient developed invasive cancer. The average age was 30.8 (median 29) in those undergoing standard treatment cf 28.5 (median 26) in the conservative group. 48% were smokers vs 65% in the conservative group. In the standard group, 25% were P0, 31% were P2, 9% were P3 and 3% were P4. In the conservative group, 59% were P0 and 41% were P1.
The benefits and costs of conservative versus standard management are discussed in these 2 groups. Conservative management requires further colposcopy visits compared with standard treatment and will impact colposcopy provision. However, there will be benefits in terms of reduced preterm labour, reduced burden on neonatal units and long term benefits of reduction in cerebral palsy associated with prematurity.
Conservative management was successful and a safe option in this cohort of women. Patients offered conservative management tended to be younger and tended not to smoke. Whether patient demographics should inform management options is discussed. Development of guidance for conservative management is required.

P – 75

Increased Detection of Cervical Intraepithelial Neoplasia (CIN) by Electrical Impedance Spectroscopy (ZedScan) in a Primary hrHPV Screening Setting

Professor John Tidy, Dr Julia Palmer, Ms Rachel Lyon, Ms Joanna Brailsford, Ms Rachel Wild

Sheffield Teaching Hospitals NHS Foundation Trust, Sheffield, United Kingdom

Introduction / Background

Primary hrHPV screening leads to new pathways in colposcopy. Women who have persistent hrHPV infection but have negative cytology are now referred. The impact of this to change the referral profile to colposcopy. If the prevalence of CIN2+ falls it reduces the performance colposcopy. Adjuvant technologies may help with increased detection of CIN2+.

Aims / Methodology

To establish the performance of colposcopy with EIS (ZedScan) in women with an abnormal primary hrHPV screening test result. A prospective cohort study of women undergoing both colposcopic and ZedScan examination as part of the investigation an abnormal screening test result at a single colposcopy clinic. Partial HPV genotyping was performed using Roche Cobas 4800 on the screening sample prior to referral to colposcopy. ZedScan detects changes in tissue impedance which are independent of aceto-white change.

Results

386 patients underwent both colposcopic and ZedScan examinations between November 2017 and September 2018. 95% of these examinations were performed by nurse colposcopists carried. The referral population included HG cytology 56 (14.5%), LG cytology 178 (46.1%), hrHPV positive cytology negative 152 (39.4%). 93 (24.1%) cases of HG disease (CIN2+, HGCGIN) were found, 48 (85.7%) cases associated with HG cytology, 23(12.9%) with LG cytology and 22(14.4%) with hrHPV positive cytology negative. An additional 29 cases (45.3%) of high grade disease were identified by ZedScan where colposcopic impression was normal or low grade disease. There was a marked increase (109%) in cases of CIN2+ in women referred with low grade cytology and 175% increase in women referred with persistent HPV and negative cytology. 44 women underwent ‘See and Treat’; CIN2+ was confirmed in 95.6% of the cases. Only 4.3% of all high grade histology was not identified by ZedScan whereas colposcopy failed to identify 35.5% of all high grade histology.

Primary hrHPV screening increases the number of women referred with low prevalence of disease. The use of ZedScan in routine colposcopy practice increases the detection of CIN2+.

ZedScan identified extra cases of disease in referral categories with low prevalence of disease (p=0.009). See and treat can be performed with a high PPV in conjunction with ZedScan

P – 76

Routine use of ZedScan Increases Detection of High grade CIN in Women who are Referred to Colposcopy with Persistent hrHPV Positive Negative Cytology Screening Results

Professor John Tidy, Ms Rachel Lyon, Dr Julia Palmer

Sheffield Teaching Hospitals Nhs Foundation Trust, Sheffield, United Kingdom

Introduction / Background

Primary hrHPV screening leads to new pathways in colposcopy. Women who have persistent hrHPV infection but have negative cytology are now referred. The impact of this to change the referral profile to colposcopy. If the prevalence of CIN2+ falls it reduces the performance colposcopy. Adjuvant technologies may help with increased detection of CIN2+.

Aims / Methodology

To establish the performance of colposcopy with ZedScan to detect CIN2+ in women referred with persistent hrHPV positive cytology negative referrals to colposcopy. A prospective cohort study of women undergoing both colposcopic and ZedScan examination for investigation of a persistent high-risk HPV infection with negative cervical cytology result at a single colposcopy clinic. Partial HPV genotyping was performed using Roche Cobas 4800 on the screening sample prior to referral to colposcopy. ZedScan detects changes in tissue electrical impedance which are independent of aceto-white change.

Results

315 women were referred with positive hrHPV but cytology negative screening results. 117 (37.1%) had HPV16 either alone, with HPV18 or other hrHPV(O) genotypes, 43 (13.7%) had HPV18 alone or with HPVO. 155 (49.2%) had HPVO. 132 women underwent biopsy with 130 having a single biopsy. 38 women (12.1%) were found to have HGCIN. Compared to colposcopic impression (CI<CIN1) alone, the use of EIS increased detection of HGCIN by 81%. 34 cases of high-grade disease (CIN2+) were detected only by a positive ZedScan result compared to 17 detected by CI alone. The PPV (CIN2+) for biopsies with CI>CIN1 and positive ZedScan was 47.2%. The PPV of biopsies by ZedScan alone was 28.5%. The NPV for colposcopy with ZedScan was 97.9%.

The performance of colposcopy for detection of CIN (PPV) in cytology negative referrals is reduced because of the low prevalence of disease. The combination of CI and ZedScan directed biopsies has a high PPV for CIN2+.

ZedScan identifies more high grade CIN than colposcopy alone. ZedScan identified 89.5% of HGCIN cases compared with 44.7% for colposcopy

P – 77

A Simple Method to Improve the Accuracy between the Presumed Depth of Excision and the Actual Depth of Excision in Women Receiving LLETZ Treatment

Dr Banchhita Sahu, Dr Dimitrios Papoutsis[1], Dr Edwina Goh[1], Dr Priyantha Kandanearchi[1], Miss Angeliki Antonakou[2], Miss Chara Tzavara[3]

[1]Department of Obstetrics & Gynaecology, Shrewsbury and Telford NHS Trust, Princess Royal Hospital, Telford, United Kingdom, [2]Department of Midwifery, Midwifery School, 'Alexander' Technological Educational Institute of Thessaloniki, Greece, Greece, [3]Department of Hygiene, Epidemiology and Medical Statistics, University of Athens, Athens, Greece

P – 78
Real World Colposcopy Practice with DYSIS: a case series from Luton Hospital

Mr Jullien Brady, Dr Manolis Papagiannakis

Luton & Dunstable Hospital, United Kingdom

Introduction / Background
Colposcopic performance can benefit from the use of adjunctive technologies. In 2018 NICE recommended DYSIS, with its adjunctive acetowhitening map, as a cost effective and clinically efficacious technology for use in the NHS. NICE also encouraged the collection of real-world data from practice with DYSIS to assess changes to patient management decisions.

Aims / Methodology
DYSIS is used routinely at Luton since March 2018 and more than 300 women have been examined. We present a select case-series to highlight how different patients have benefited from the use of DYSIS in assessments, and from the ability to document and track disease over time.

Results
We present 14 cases (mean age 34.1 years). 7 had borderline/low-grade cytology, 2 had moderate dyskaryosis, one PCB and four were in a conservative management pathway for prior CIN2. The DYSIS map triggered the upgrade of colposcopic opinion in five cases. Twice this was to potential high-grade, one of which was confirmed as CIN2 by biopsy. In three cases with normal colposcopic impression the DYSIS map revealed potential low-grade areas triggering repeat screening at 12 months rather than discharge to routine recall. In three cases, a negative DYSISmap gave the clinician confidence to discharge to routine screening. Four patients (mean age 29.8 years) with prior small area CIN2 are being followed up every six months (by colposcopy and cytology) with images and maps being compared to establish an objective colposcopic opinion on disease progression/regression.
All cases above were performed by a BSCCP-accredited current experienced Colposcopist (>750 new cases of abnormal cytology in the last five years, 20 years colposcopy practice). Experience does not preclude that the map can impact opinion for patient benefit.
Using DYSIS provides additional tools to help clinicians detect additional disease and also optimise patient management decisions for the benefit of patients, including discharge to routine recall, but also more intense surveillance.

P – 79

The use of DYSIS to Identify and Treat High grade CIN before Routine Cytology Recall; Application of Possible Conservative Management from a case study from Luton Hospital

Mr Jullien Brady, Dr Manolis Papagiannakis

Luton & Dunstable Hospital, United Kingdom

Introduction / Background

Evidence shows that a significant proportion of CIN2 lesions resolves if left untreated, especially in younger women. This may be spontaneous, or as a consequence of the diagnostic biopsy removing the high-grade disease. Excisional treatments increase the risk for poor obstetric outcomes, so it is beneficial for select patients to potentially opt for surveillance rather than treatment.

Aims / Methodology

To explore how standardised imaging and mapping can be used for the objective follow-up of colposcopy patients. DYSIS is used at Luton since March 2018. Its mapping and documentation system, that allows image comparisons for disease tracking, is being exploited for conservative management in select women with CIN2. We present a case study to highlight how disease can be tracked longitudinally.

Results

A 56-year-old patient with negative previous cytology was seen for post-coital bleeding. She was due routine cytology screening in 2 years' time. Her colposcopy was considered low-grade initially by the Colposcopist but upgraded to high grade following super-imposition of the DYSIS map. Two biopsies were taken from areas highlighted by the DYSIS map, that confirmed CIN2. The patient was scheduled for LLETZ, but had a repeat colposcopy prior to the excision, that suggested that the lesion was resolving (low-grade impression and map). For a younger patient, conservative management by follow-up may have been preferred, but given her age the patient was treated. The treatment specimen histology found no residual CIN in agreement with the colposcopic findings.

On select colposcopy patients with small area/volume disease, considering age, fertility wishes and other risk factors, although LLETZ is suggested and routinely performed, repeat colposcopy with mapping is a viable alternative. If the lesion has resolved, follow-up by colposcopy and cytology in 6 months could be considered.

Standardised imaging and mapping provide colposcopists tools to detect and manage CIN2 more confidently than before.

P – 80
The Natural History of Cervical Intraepithelial Neoplasia during Pregnancy.

Miss Nisrin Marcus, Miss Diana Marcus, Miss Rose Eastell

Kings College London, London, United Kingdom

Background
Cervical cancer is the most common gynaecological malignancy during pregnancy. Additionally, cervical intraepithelial lesions are typically diagnosed in the fertile age. Women who attend colposcopy during pregnancy, understandably have heightened levels of anxiety; and their colposcopic evaluation requires a high degree of skill. Few studies have looked at the evolution of Cervical intraepithelial neoplasia (CIN) in pregnancy.

Aims
To analyse the outcome the of cervical dyskaryosis in pregnant patients referred to a tertiary London Hospital

Methods
Retrospectively identified all cases referred to colposcopy at Kings College Hospital during pregnancy between Sept 2011-August 2017. Women received a tissue biopsy only if clinically indicated. All women were seen postnatally for colposcopy between 3 and 6 months. Women were excluded from final analysis if they were referred for reasons other than abnormal smear, and if follow up data was not available.

Results
82 pregnant patients were seen during this period. The median age of 35yo (27-48 years old). 73% were parous and 10% were smokers. 23% had previous LLETZ treatments. 29 patients (35%) were referred with high grade smear abnormalities, 38 with low grade abnormalities (46%). The remaining women with referred as follow up for glandular disease 2, (2%), vaginal bleeding 7 (9%) and an abnormal cervix 5 (6%) – were excluded from further analysis. In addition, all patients with inadequate follow up data were also excluded (15 cases).

Of the remaining 24 cases of high-grade smear referrals, CIN regressed in 6/24 (25%) cases and persisted in 18/24 cases (75%) necessitating excisional treatment. No cervical cancer cases were diagnosed.

Of those seen with low grade smears during pregnancy, regression, persistence and progression rates were 63%, 19% and 19% respectively.

Conclusion
This study shows high rates of regression, particularly of low-grade abnormalities following pregnancy.

P – 81

The ZedScan Adjunct Device – Evaluation for Integration in to the Colposcopy Services at East Lancashire Hospitals

Ms Uma Krishnamoorthy, Mrs Tammy Waddington

East Lancashire Hospitals NHS Trust, Burnley, Lancashire, United Kingdom

Introduction / Background

Cervical cancer is the most common cancer in women under 35 years in UK. Colposcopy is reliant on nonspecific visual indicators which are highly variable and subjective. Variation reported performance for colposcopy is high with average sensitivity to distinguish between low and high grade CIN lesions being around 55%. ZedScan is an adjunct technology that utilises Electrical Impedance Spectroscopy (EIS) to provide a rapid, reliable &reproducible assessment of underlying cervical tissue, providing real-time and more accurate diagnostics, thus dramatically reducing subjectivity.

Aims / Methodology

Prospective evaluation of ZedScan impact on referrals to colposcopy, over a 3 month period between June-August, in 101 patients. 88 patients had data set available for analysis

Results

Disease prevalence for ELHT population was 36.3% (National average 39.5%).
Combination of ZedScan/colposcopy increases detection of HG disease by 14.3%.
ZedScan increased rate of detection by 10.7% in all abnormal cytology referrals and by 27.3% for LG referrals.
Where See & Treat is indicated in HG referrals, clinicians can confidently treat at first visit due to high PPV of 100%.
Biopsy accuracy is improved when both ZedScan and colposcopy agree, with the use of Single Point Mode reducing the number of biopsies per woman.
Where ZedScan and colposcopy agree on no disease, clinician can confidently return patient to routine recall/screening based on NPV 100%.

Conclusions

Health Economics and Provider Benefits based on 3 year modelling revealed that fewer appointments required could release 1,862 appointments over 3years and generate additional income £345,000.

Reduction in histology costs because of fewer biopsies. Also potential for, up to 45% reduction over 3 years – ca. 2,252 over three years with further efficiency gains.

ZedScan adjunct would improve colposcopist’s confidence through objective assessment and strengthen safety and quality of services further.

P - 82

Haematometra: A Recognised Complication after Large Loop Excision of Transformation Zone of Cervix. A Series of Four cases within a twelve-month period

Ms Uma Krishnamoorthy, Dr Yen Eit Liew, Dr Mayurika Sinha

East Lancashire Hospitals NHS Trust, Burnley, Lancashire, United Kingdom

Aims / Methodology

Review was undertaken on a series of 4cases of haematometra, in our unit over last 12 months to explore if there are any trends, similarities or collective lessons to learn**.**

Results

All 4 had one or more LLETZ previously by different clinicians following high grade dyskaryosis under local anaesthetic.

Average dimensions of cervix removed were around 22mm x15.5mmx14.25 and depths ranged from 12 mm to 18mm at each LLETZ.

2patients had 2LETZ procedures with cumulative depth of 17 and 22 mm while other 2 had only one LLETZ with depth of 12 and 18 mm.

All presented to gynaecology outpatient clinic as GP referrals with few months' history of amenorrhoea and pelvic pain following LLETZ.

Diagnosis was by pelvic ultrasound scan for all.

All had examination under anaesthetic, dilatation of cervix &drainage of haematometra in theatre.

3 out of 4had Mirena coil inserted following drainage except in one case of pyometra.

Unfortunately, 2patients had recurrent haematometra despite cervical dilatation under anaesthetic &insertion of Mirena coil. Coincidently, both had 2previous LLETZ.

In both, 1sthematometra occurred 7 and 11 years after 2ndLLETZ.

In one, 2ndhematometra occurred 8 years after 1stdrainage and a 3rdrecurrence 3months after 2nddrainage.

Recurrence occurred just 3months after 1stdrainage in 2ndpatient with recurrence.

Conclusions and Recommendations

Haematometra secondary to cervical stenosis post LLETZ is a recognised complication.

Important predictive factors are probably depth/volume of cervix removed, and number of LLETZ treatments.

This merits inclusion as part of discussions &counselling with patient as part of informed consent process before performing any treatment to cervix.

P – 83

Reproductive and Oncological Outcomes after Local Treatment for CIN

Dr Antonios Athanasiou, Dr Areti Angeliki Veroniki[1,3], Dr Orestis Efthimiou[4], Dr Ilkka Kalliala[1,5], Dr Huseyin Naci[6], Dr Sarah Lever[1,2], Dr Maria Paraskevaidi[1], Dr Pierre Martin-Hirsch[7], Prof Phillip Bennett[1,2], Professor Evangelos Paraskevaidis[2,8], Dr Georgia Salanti[4], Dr Maria Kyrgiou[1,2]

[1]Institute of Reproductive and Developmental Biology, Department of Surgery & Cancer, Faculty of Medicine, Imperial College London, London, United Kingdom, [2]Imperial Healthcare NHS Trust, London, United Kingdom, [3]Department of Primary Education, School of Education, University of Ioannina, Ioannina, Greece, [4]Institute of Social and Preventive Medicine (ISPM), University of Bern, Bern, Switzerland, [5]Department of Obstetrics and Gynaecology, University of Helsinki and Helsinki University Hospital, Helsinki, Finland, [6]Department of Health Policy, London School of Economics & Political Science, London, United Kingdom, [7]Department of Gynaecologic Oncology, Lancashire Teaching Hospitals, Preston, United Kingdom, [8]Department of Obstetrics & Gynaecology, University of Ioannina and University Hospital of Ioannina, Ioannina, Greece

Introduction / Background

There are several excisional or ablative techniques for cervical intra-epithelial neoplasia (CIN). There is evidence suggesting that treatment for CIN increases the risk of adverse obstetric outcomes in subsequent pregnancies and that this risk is greater for more radical treatment modalities which remove a larger part of the cervix. On the other hand, less radical treatments might compromise oncological safety. However, the data is conflicting.

Aims / Methodology

Our aim is to compare all local treatment techniques for CIN by performing a network meta-analysis (NMA). NMA is an extension of pairwise meta-analysis allowing to synthesise not only direct (i.e. head-to-head comparison of treatments of interest) but also indirect evidence (i.e. treatments of interest are not directly compared, but comparison is possible through an intermediate common comparator).

We included both randomised clinical trials and observational studies comparing the risk of recurrence and adverse pregnancy sequalae amongst different treatment techniques and/or to untreated women. We searched for published and unpublished studies in electronic databases and trial registries, and we also hand-searched references of identified papers. Risk of bias in RCTs and observational studies was evaluated by RoB 2 and ROBINS-I tool, respectively. A random-effects meta-analysis was performed for each treatment comparison. When transitivity assumption was found to be valid (i.e. effect modifiers didn't differ amongst the different treatment comparisons), an NMA was performed as well. The credibility of the evidence was evaluated by the CINEMA tool.

Results

98, 199 and 27 studies were identified for the risk of adverse reproductive outcomes, pre-invasive recurrence and invasive recurrence, respectively. According to the meta-analyses, relative risk after any treatment was 1.78 (1.60, 1.98) for preterm birth and 3.30 (2.57, 4.24) for invasive cervical cancer, compared to untreated women. More extensive results from our NMA will be announced at this conference.

P – 84

Oncological and Reproductive Outcomes after Fertility-Sparing Surgery in Cervical Cancer: a Systematic Review and meta-analysis

Dr Menelaos Tzafetas, Dr Sarah Lever[1], Dr Anita Mitra[1], Dr Kostas Lathouras[1], Dr Ilkka Kalliala[1,2], Dr Maria Kyrgiou[1]

[1]Department of Surgery and Cancer, Imperial College London, London, United Kingdom, [2]Department of Obstetrics and Gynaecology, University of Helsinki, Helsinki, London

Introduction / Background

Several approaches to fertility-sparing surgery in women with cervical cancer exist. Differences in radicality of parametrial excision are thought to exist according to surgical technique. Minimal access approaches may offer benefits in terms of enhanced patient recovery and nerve-sparing, however comparative oncological safety compared to an open approach is highly debated, especially in tumour volume >2cm. Pregnancy outcomes may also vary according to approach. This is the first systematic review and meta-analysis to compare the oncological and reproductive outcomes of simple or radical trachelectomy surgeries.

Aims / Methodology

We searched relevant studies in MEDLINE, PUBMED and CENTRAL from inception to September 2018. Studies were eligible if they investigated oncological and/or reproductive outcomes following any radical trachelectomy surgical approach. Data were extracted in duplicate and additionally requested from authors where necessary. The primary outcome was cervical cancer recurrence rate after treatment. Secondary outcomes were margin involvement rate, residual tumour rate, conception rate and pregnancy outcomes (including 1st and 2nd trimester miscarriage rates, delivery rate, preterm labour rate (<37 weeks)). Random effects models were applied in STATA IC v15 to determine pooled estimates and corresponding heterogeneity. Sensitivity analyses were performed to analyse subgroups and where significant heterogeneity was detected.

Results

We identified 59 eligible studies including over 2150 women. Recurrence rate varied by surgical approach: simple vaginal trachelectomy (SVT) 2% (95%CI 1-3%, I^2=NA), vaginal radical trachelectomy (VRT) 3% (95%CI 2-4%, I^2=0%) abdominal radical trachelectomy (ART) 1% (95%CI 0-2%, I^2=35%), laparoscopic radical trachelectomy (LRT) 2% (95%CI 0-6%, I^2=31%), radical robotic trachelectomy (RRT) 0% (95%CI 0-4%, I^2=0%). Involved margins rate was lowest for LRT (7%, 95%CI 0-3%, I^2=0%) and highest for RRT (7%, 95%CI 0-25%, I^2=50.8%). Conception rate was highest for VRT (62%, 95%CI 47-75%, I^2=84%) and lowest for ART (34%, 95%CI 25-44%, I^2=55%).

P – 85

Do the Current NHSCSP Publication Number 20 Standards for Colposcopic Accuracy need Reconsidering?

Miss Deirdre Lyons[2], Miss Ellie Murray[1], Louise Cadman[3]

[1]University Of Aberdeen, Aberdeen, United Kingdom, [2]Imperial College Healthcare NHS Trust, London, United Kingdom, [3]The Wolfson Institute of Preventive Medicine, Queen Mary University of London, London, United Kingdom

Introduction / Background

NHSCSP Publication 20 states that colposcopic performance is measured by Positive Predictive Value (PPV). However, PPV is dependent on prevalence of high grade (HG) disease. As prevalence of HG disease decreases, following HPV vaccination programme and implementation of Primary HPV testing, is PPV the correct metric to measure colposcopic accuracy?

Aims / Methodology

A clinical audit was conducted, with data collected from Cyres and Excelicare, which included all new patients with abnormal referral cytology, that received a biopsy in St Mary's Colposcopy clinic from 01/01/17 – 31/12/17. Sensitivity, specificity, PPV and NPV were calculated using the colposcopic impression and histological result. In addition, validation of PPV and sensitivity was explored/ calculated using final histology outcomes. The performance of the unit and each colposcopist was evaluated and compared with NHSCSP national standard.

Results

935 patients with abnormal referral group were analysed, split into low grade (LG) and HG cytology referral groups. Total abnormal cytology referrals had sensitivity of 57.63%, PPV of 49.64%, specificity of 91.55% and NPV of 93.73% for colposcopic impression. Within LG referrals, PPV was 24.45%, within HG referrals PPV was 67.50%.

If formal validation is undertaken, then PPV of 56.93% and sensitivity of 68.69% was calculated and compared with the original PPV and sensitivity values. As a unit, the PPV value of 49.64% did not meet the national guideline. Individually, 5 out of 10 colposcopists met the national guideline.

As the prevalence of HG disease decreases, the PPV decreases, irrespective of the splitting of the referral cytology group. Hence, it is probably not an accurate assessment of performance. This audit suggested that a single parameter is probably not sufficient to evaluate colposcopic performance. Statistical input would be of benefit in selecting parameter(s) that could be used to identify HG disease and not over-treat LG disease.

P – 86
Longterm Follow-up of Conservatively Managed CIN 2 at Poole Hospital

Dr Louise Melson, Miss Anni Innamaa, Mr Jonathan Lippiatt

Poole Hospital, Poole, United Kingdom

Introduction / Background
There is evidence to show that CIN 2 will regress in young women and progression to cancer is rare. Intervention with LLETZ treatment may not always be required. LLETZ >10mm deep is associated with potential morbidity for future pregnancy. Many authors recommend conservative management in young women and it is increasing in practice.
We have been offering conservative management of CIN 2 in selected patients in Poole Hospital Colposcopy clinic since 2011. We have previously shown regressions rates of 60% in line with other studies. All patients undergoing conservative management are prospective enrolled into an audit and regression rates monitored annually.

Aims / Methodology
Conservative management of biopsy proven CIN 2 was offered at Poole Hospital to young women with lesions fully visible at colposcopy, who were able to attend for 6 monthly colposcopy until the lesion regressed or required treatment. 32 patients between 2011-15 were successfully managed and discharged to smear follow up and these women formed the study group. Data was extracted from the electronic patient record, colposcopy database and Open Exeter smear record.

Results
- **32 patients, average age 26.4 yrs (19-32)**
- **68.8% patients had normal colposcopy/smear at discharge from colposcopy clinic.**
- **31.2% patients had low grade smear/CIN 1 at discharge.**
- **Length of follow up 5.1 yrs (3-6yrs) in community**
- **Average no of smears 2.5 per patient (1-6)**
- **29 patients all had on-going negative cytology 90%**
- **3 patients referred back to colposcopy 7%**

Although not part of the protocol 8 patients did have a test of cure smear as part of the follow up and all were negative so went back to normal recall.

Discussion
Conservative management of CIN 2 with regular observation and follow up is a suitable alternative to LLETZ treatment in selected young women. We had good rates of regression and longer term cytology follow up over 5.1 years shows persistence of normality in the majority 90%.
It is reasonable to offer conservative management of CIN 2 as an option to young women with lesions fully visible at colposcopy. They are however, not normally eligible for HPV test of cure so will need annual smears for 10 years. This requires compliance from the patient and they should be encouraged to attend for regular smears. We are continuing to follow up the cytology of these women. There is currently little evidence to determine which lesions will regress and which will persist. A large multi-centre prospective study of conservative management-The Prediction of Regression in CIN 2 (PRINCess study), aims to define histological and patient predictors of regression and guide management in the future.

P – 87
Time to Reconsider Length TZ1 Excision?

Dr William Parry-smith, Mr Richard Todd, Mr Marc Arbyn, Mr Charles Redman

Royal Stoke University Hospital, Stoke-on-trent, United Kingdom

Introduction / Background
National guidance in England suggests that TZ1 excisions be at least 7mm in length. We wished to evaluate the association between length of excision and outcome in women with a Type 1 TZ.

Aims / Methodology
Data was obtained from the Royal Stoke Hospital colposcopy database and Open Exeter system from 2nd April 2012 to 28th October 2016. A total of 697 treatments (TZ1) with full data information were available for analysis. We performed logistic regressions, one with length as numerical or a categorical variable (<7mm or ≥7mm). Further logistic regressions in young women (<35 years) and older women (>=35 years) with depth (<7mm or ≥7mm) were assessed.

Results
In all ages there was no significant association between length and outcome.

Conclusions
Advising loop excisions to be a least 8 mm in length may be needless and risk unnecessary morbidity.

P – 88

A Follow up Study on Leep, with a Focus on Recurrence/Persistence of Disease and Correlation between Cytology and Leep Pathology

Dr Zoqeen Akhtar, Dr Tabassum Perveen, Dr Lakshami Priya, Dr Shabana Ashiq

Corniche Hospital, Abu Dhabi, United Arab Emirates

Background

Loop electrosurgical excision procedure (LEEP) is a basic procedure in the conization performed on patients with CIN II/III. After excisional therapy, close follow up is essential for the earlier detection of residual and recurrent disease. The value of PAP-smear and HPV-DNA tests for investigation of residual and recurrent disease in patients diagnosed with high-grade intraepithelial lesion after LEEP treatment was purposed.

Aims and Objectives

To study the cytology prior to LEEP procedure and correlation with the pathology result of the LEEP specimen .To follow up smears and study the correlation between persistent disease and pathology of LEEP specimen including the involvement of margins.

Materials and Methods

86 patients who had LLETZ were included in this study. Their PAPS smear and LLETZ pathology were reviewed. They were then followed with PAP-smear tests in terms of recurrence and residual disease.

Results

26 patients had LEEP done for persistent LSIL and only 6 (23%) had high grade lesion on pathological examination of LEEP specimen.

Of the remaining who were HSIL on PAPS smear, 80 % had it confirmed on LEEP.
There was 1 case that had suspicion of adenocarcinoma in situ (AIS) on PAPS smear and had hysterectomy.
Another case with high grade lesion on PAPS smear, was actually AIS on biopsy, so she had hysterectomy and vault smear negative after 6 month and 1 year.
Histopathological evaluation of LEEP materials revealed the presence of low grade disease in 21 and high grade disease in 49 patients. Surgical margin were positive in 17 of these patients.
The persistence of disease was observed in 22 (25%) patients. 9 of these patients had HSIL on PAP-smear at 6 months follow up. Positive LEEP surgical margins were found to be positively correlated with persistence of disease. Three cases had hysterectomy in view of persistent HSIL after LEETZ.

Conclusion

In our hospital test of cure was not done routinely, by including test of cure, we can reduce the number of follow up visits and also predict the persistence of disease at an earlier stage.

P – 89

Surveillance of CIN2 – Could we Avoid Treatments at an NHS Foundation Trust

Mr Greg Pearson

Salisbury NHS Foundation Trust, Salisbury, United Kingdom

Introduction

There is a body of evidence suggesting CIN2 in younger women is associated with high (50%) regression rates in under 30s. Cervical LLETZ procedures can be associated with increased rates of preterm labour, and to avoid unnecessary treatment is desirable. In our local policy we agree to conservative management of CIN2; the purpose of this audit was to observe if this was being offered and whether guidelines were being adhered to.

Methods

Retrospective review of all cases of CIN2 diagnosed histologically at Salisbury NHS Foundation Trust from January 2017 to the end of April 2018. Cases were identified from histology records and case notes reviewed manually and cross checked with interrogation of the MASEY colposcopy database by a colposcopist.

Results

32 cases of CIN2 were identified. The women ranged in age from 24-67, median age of 31; 15/32 14 (47%) were =/<30. Diagram 1 demonstrates the referral cytology; interestingly, 2 patients had their CIN2 diagnosed after a referral with suspicious symptoms – these women were aged 42 and 67. One patient left the local area after diagnosis.

Overall 21 (67%) had a treatment within 3 months of being diagnosed with CIN2 ('primary treatment'). All but one of these was excisional therapy (one underwent ablative therapy for CIN2-3 after a low grade smear). Diagram 2 demonstrates the histology of all the LLETZ obtained.

Of the 8 (33%) of women managed conservatively, the median age was 31 (range 24-47). The conservatively managed women were reviewed in our colposcopy clinic within 4-9 months of their diagnosis. 7 (88%) went on to have LLETZ after a period of observation ('deferred treatment'). Only one patient avoided a subsequent LLETZ (the lesion regressed to biopsy-proven HPV changes only).

Discussion

In this series over >90% women with CIN2 on a directed biopsy had a subsequent cervical treatment, despite 14 of the women being <30 years of age. Only one patient at present has had clinical follow-up to the point where no CIN2 was seen (and is awaiting a 12 month smear). Of the 10 women <30 who had excision treatment, the final histology was normal or CIN1 in 30%.

By undertaking this audit and highlighting our unit's SOP and for conservative management we hope to increase awareness of conservative management of CIN2 and women who may be eligible for such management. This we may avoid some women undergoing unnecessary LLETZ treatment (although at the cost of increase clinical follow-up).

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Review of ?HGCGIN Index Smears and Non Cervical Glandular Neoplasia in a NHS TRUST with 2 Cross Site Hospitals over a 2 year Period from 2017 through 2018

Mr Manish Maheshwari

Epsom And St Helier Hospital, Pinner, United Kingdom

Review of index smears ?HGCGIN over a 2 year period. Also includes non cervical glandular neoplasia as a couple of patients were diagnosed with AIS. includes follow up where available.

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