An audit to assess the completeness of cervical loop excision histopathology reports

Background

Histopathology plays a structural role within cervical screening, linking together the various elements of the programme. Biopsies form a clinical 'gold standard' against which findings from cytology and colposcopy are correlated, and are therefore critical to multidisciplinary working.

The NHS Cervical Screening Programme Guideline for Histopathology Reporting in Cervical Screening recommends the use of a standardised proforma for the reporting of cervical intraepithelial neoplasia (CIN) in excision specimens.

This is not currently standard practice in the Histopathology department at Royal Stoke University Hospital, but was specifically recommended by the most recent Cervical Screening QA Team Visit Report in February 2014: 'All pathologists should use a standard proforma for the reporting of cervical treatment specimens.'[1]

Aims and objectives

To assess the completeness of cervical loop excision histopathology reports over a seven-month period to evaluate whether the introduction of a proforma would be beneficial.

Standards

The proforma (available on request, please send an email to clinicaleffectiveness@rcpath.org) is based on guidelines from the Royal College of Pathologists[2] and the NHS Cervical Screening Programme.[3] All reports should contain 100% of the core data items itemised on the proforma.

Methods

All of the cervical loop excision reports authorised between 1 January 2014 and 31 July 2014 were collected off the Masterlab system by searching for 'cervical loop' specimen types. This resulted in an excel spreadsheet containing 340 specimens, numbered from 4–344.

An online random number generator was used (www.randomizer.org) to generate a list of numbers, which was then cross-referenced with the excel spreadsheet and used to select cases for auditing. Any cases that had no evidence of CIN within the excision were excluded, as was one case showing melanoma, one containing invasive squamous cell carcinoma and one report that was not accessible.

In the event of a case being unsuitable, the next number on the list was used until 50 reports of CIN in a loop excision had been randomly selected. The reports were accessed and compared to the proforma with any omissions noted.

Results

The results can be found in table 1 (page 199). The data criteria most often not reported on were the number of slices containing CIN (52%), whether there was crypt extension (36%), if there was human papilloma virus (HPV) effect (80%), the presence of any background features (7%) and whether the findings in the loop correlated with the cytology result (40%). All other criteria were included in over 90% of reports.

Discussion

Documenting the absence of findings can be as important as documenting their presence. In the case of crypt extension, HPV effect and background features, it may be that these were only commented on if present and the absence of these features was not felt noteworthy, nor likely to alter patient management.

However, if there is no comment on the report it is unclear whether that feature was not present, or whether its presence was omitted from the final report.

One report did not comment on the completeness of excision at any margin; however, this was a case of CIN1 and although this means the report did not meet guidelines, it would not have affected patient management.

NHS Cervical Screening guidelines state that, 'The grade of CIN in the biopsy or large loop excision of the transformation zone (LLETZ) must be correlated with the grade of dyskaryosis in the cytology report'.[3] This audit highlights that this was only explicitly recorded on the histology report in 40% of cases.

Conclusions and recommendations

This audit clearly highlights that some criteria are being omitted from cervical loop excision histopathology reports, particularly pertinent negative findings.

Table 1: Results showing the completeness of cervical loop excision histopathology reports.

Data and criteria to be included	No. of reports	%
Number of pieces in loop (macro)	50	100
Number of slices examined	50	100
Transformation zone	49	98
Grading of CIN	50	100
Number of slices with CIN	26	52
Extension into crypts	18	36
HPV effect	40	80
CGIN	49	98
SMILE	42	84
Stromal invasion	47	94
Endocervical margin	49	98
Ectocervical margin	49	98
Deep stromal margin	49	98
Background features	7	14
Correlation with cytology	20	40
Diagnosis	50	100

The introduction of a proforma may help to standardise the histology reporting of loop excisions within the department, and ensure that important data is not omitted. This should be discussed within the department and any changes made should be re-audited to assess their effectiveness.

Action plan

The action plan comprises three points from August 2015 to August 2016. In August 2015, consultant histopathologists in gyneacology subspecialty teams circulated the laminated copies of the proforma.

In the same month, Dr Jane Walker gave a departmental presentation of audit reports in histopathology. In August 2016, Dr Emma Sheldon conducted a re-audit against the same standard.

The according proforma are available on request from the Clinical Effectiveness Department.

Re-audit 2016

Background, aims, objectives and standards

All these followed the process described above in the main audit.

Methods

All of the cervical loop excision reports authorised between 1 January 2016 and 31 July 2016 were collected off the Masterlab system by searching for 'cervical loop' specimen types. This resulted in an excel spreadsheet containing 421 specimens. An online random number generator was used (www.randomizer.org) to generate a list of numbers, which was then cross-referenced with the excel spreadsheet and used to select cases for auditing. Any cases that had no evidence of CIN within the excision were excluded (as one case shows invasive cancer, two containing only inflammation and two reported by externals).

In the event of a case being unsuitable the next number on the list was used until 50 reports of CIN in a loop excision had been randomly selected.

Results

The results can be found in table 2 (page 200). The data criteria most often not reported on were the number of pieces in the loop (88%) and whether the findings in the loop correlated with the cytology result (78%). All other criteria were included in over 90% of reports.

Comparison with previous audit in 2014

The figures of both results are compared against each other in table 3 (page 200).

Conclusions and recommendations

- This re-audit shows that there have been massive improvements in most of the core data.
- The number of pieces of the loop received, is related to macro description rather than

Table 2, left: results of the re-audit 2016 (blue=improvement, red=dip).

Data criteria to be included/Total of 50 cases	Yes	No	%
Number of pieces in loop	44	6	88%**
Number of slices examined	50	0	100%
Transformation zone	48	2	96%
Grading of CIN	50	0	100%
Number of slices with CIN			
CGIN	47	2	94%
SMILE	47	3	94%
Stromal invasion	47	2	94%
Margins	50	0	100%
Cytological correlation	39	11	78%
Diagnosis	50	0	100%

Table 3, right: comparison with the previous audit 2014 (blue=improvement, red=dip).

Comparison	Audit 1	Audit 2
Number of pieces in loop	100%	88%
Number of slices examined	100%	100%
Transformation zone	98%	96%
Grading of CIN	100%	100%
Number of slices with CIN	52%	96%
CGIN	52%	94%
SMILE	84%	94%
Stromal invasion	94%	94%
Margins	98%	100%
Cytological correlation	40%	78%
Diagnosis	100%	100%

micro, hence it has been omitted from the proforma.

- The proforma will remain as an aid memoire rather than a full proforma, as all histopathologists in the gynaecology subspecialty team have agreed.
- Some of the reports with missing data involved trainees so we recommend that trainees need to be reminded on the use of the proforma.
- We recommend re-auditing in next year.
- The audit analysis, conclusion and updated proforma has been presented by Dr Nour Hemali at the department, followed by another presentation the Colposcopy Audit Meeting in September 2017.

Action plan

The action plan comprises four points from June 2017 to January 2018. In June 2017, Nicola Lomas updated the proforma in standard operational procedure (cervix trimming). In August 2017, consultant histopathologists in gynaecology specialty teams as well as trainees circulated laminated copies of the updated proforma; from that point onwards, the same group of stakeholders (trainees being doctors and senior biomedical scientists) continued to use the proforma as an aid memoire.

Dr Nour Hemali conducted a re-audit in 2018. (the final reaudit showing an approximate achievement of 100% will be presented in September 2018). The final updated proforma can be obtained from the Clinical Effectiveness Department.

Dr Emma Sheldon
Consultant
Royal Stoke University Hospital

Dr Jane Walker
Consultant
Royal Stoke University Hospital

Dr Nour Hemali
ST2 Histopathologist
Royal Stoke University Hospital

References

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