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Research paper 7

Audit of documentation of quality control parameters in histopathology

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Introduction and objectives: Provision of safe and quality laboratory reports requires stringent quality control measures. Assessment and documentation of tissue section quality at reporting is mandatory to prevent pitfalls related to poor quality. The objective is to audit documentation of quality parameters against a 100% benchmark and to identify reasons for any unsatisfactory quality.

Methodology: Request forms from January to December 2022 were analysed for documentation of the quality of fixation, processing, microtomy, staining, mounting and labelling as satisfactory or unsatisfactory for reporting. If unsatisfactory, the reason indicated was recorded. Data were analysed using SPSS software.

Results: There was a total of 4344 requisition forms. Quality parameters were documented in 3881 (89.3%) and not documented in 463 (10.7%). Fixation was recorded as satisfactory in 3855 (99.3%), processing in 3773 (97.2%), microtomy in 3748 (96.6%), staining in 3860 (99.5%), mounting in 3873 (99.8%) and labelling in 3875 (99.8%). Fixation was unsatisfactory in 26 (0.7%), processing in 108 (2.8%), microtomy in 133 (3.4%), staining in 21 (0.5%), mounting in 8 (0.2%) and labelling in 6 (0.2%). The reasons for unsatisfactory sections were due to fragmentation resulting from poor processing, retention of water and inadequate removal of wax, over or under-staining with eosin, incorrect embedding plane, thick sections, tissue loss, folds, rolled up tissues, crush artefacts, holes, scores, chatters, carryovers and air bubbles or combinations of these factors.

Discussion and conclusion: The rate of documentation of the quality parameters was high but not on par with the benchmark level. Unsatisfactory status was higher in areas of processing and microtomy. Hence, stringent quality control measures for processing and microtomy followed by reaudit are due.

Keywords: quality parameters, histopathology, tissue processing, microtomy

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