Use of clinical vignettes and virtual microscopy model in teaching of pathology

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Background: In contemporary medical curricula, pathology remains a fundamental part of the learning experience. Recently there has been a growing need to implement innovative teaching techniques in light of technological change. In addition there is an increasing need to redress the balance of an earlier minimal approach to pathology in medical curricula Australia-wide. The challenge for clinical academics is to enhance the learning experience and improve the clinical appreciation of pathology in medical students.

Method: In this study, we have introduced a series of (Histology for Pathology) lectures to familiarise the students with the normal histological features across all systems prior to the introduction of pathological features. In addition, the teaching of pathology in the (Virtual Microscopy) lecture is grounded in a clinically-relevant vignette that stimulates students to learn pathology in a dynamic fashion. The format of each session commenced with the presentation of a clinical case, whose features warranted further investigation by biopsy. The histological features of the biopsy were able to be demonstrated to the students on the lecture theatre screen in a way that simulates what the students will see in the laboratory session using the microscopes. The effectiveness of this teaching approach was measured using the conventional laboratory-style of examination. This formative examination comprised six stations, each set as a clinical vignette. Each of the stations required responses to questions on gross or microscopic specimens, in a 5-minute timeframe, for a total of 18 assessment items. A practical assessment was introduced to test the knowledge gained from these sessions and standard feedback of the sessions was obtained from the students.

Results: The sessions received good feedback from the students. One hundred and forty five students attended the practical test. No students scored below 50% mark in the examination. The median student mark for this practical exam on was 16.5/18 (91.7%, n=145).

Conclusion: The use of clinical vignettes and virtual microscopy model is well accepted by the medical students in learning pathology. This result indicates a good learning outcome and warrants further analysis of the effectiveness of this teaching technique.