RCPA Quality Assurance Programs Pty Ltd Presentations

CORRELATION OF HISTOPATHOLOGY OF PATIENTS WITH NEGATIVE HUMAN PAPILLOMAVIRUS (HPV) AND HIGH-GRADE LIQUID-BASED CYTOLOGY RESULTS FOLLOWING INTRODUCTION OF PRIMARY HPV CERVICAL SCREENING IN AUSTRALIA

Alexander A. Borecki, Kyung Park

Capital Pathology, Department of Histopathology and Cytology, Deakin, ACT, Australia

Aim: The study correlates histopathology in patients with negative human papillomavirus (HPV) and high-grade liquid-based cytology (LBC) testing following the introduction of primary HPV screening for cervical cancer in Australia.

Methods: Retrospective audit of cervical samples submitted to Capital Pathology, ACT, between 1 December 2017 and 30 April 2019. HPV testing performed by Roche Cobas 6800 (Roche Diagnostics). HPV and LBC results, patient age and histopathology follow-up within 6 months of cytology was documented. Low grade cytology included low-grade intra-epithelial lesion (LSIL) and possible LSIL. High-grade included all other abnormal cytology results.

Results: A total of 365 cases of HPV-negative, abnormal cytology were identified: 297 of 365 (81.4%) were low-grade and 68 of 385 (18.6%) were high-grade. 14 of 68 (20.5%) cases with HPV-negative and high-grade cytology had histopathology within 6 months: 3 endometrioid adenocarcinoma, 2 endometrial malignancy, 1 adenocarcinoma (endocervical), 2 serous adenocarcinoma, 2 squamous cell carcinoma, 3 high-grade intra-epithelial lesion (HSIL) and 1 adenosquamous carcinoma. The median age was 64 years.

Discussion: This study identified 14 patients with HPV-negative, high-grade cytology confirmed on histopathology. This data may support co-testing of patients in their sixth decade as an alternative to primary HPV testing.

RESOLUTION OF GROSSLY DISCREPANT INTER-ANALYSER BILIRUBIN RESULTS IN PATIENTS ON ELTROMBOPAG THERAPY: A HEPATOTOXIC DRUG THAT AFFECTS BILIRUBIN MEASUREMENT

Timothy H. T. Cheng¹, Teresa K. C. Tsui¹, Jeffrey S. S. Kwok¹, Lydia C. W. Lit¹, Elaine Y. L. Wong¹, Richard K. T. Kam¹, Denis Grote-Koska², Antje Staaden², Hitoshi Okada³, Noriko Fuke³, Raymond S. M. Wong⁴, Chi-Kong Li⁵, Michael H. M. Chan¹

¹Department of Chemical Pathology, Prince of Wales Hospital, The Chinese University of Hong Kong, Shatin, Hong Kong;

²Hannover Medical School, Institute of Clinical Chemistry, Hannover, Germany; ³Department of Pediatrics, Kagawa University, Kagawa, Japan; ⁴Sir YK Pao Centre for Cancer and Department of Medicine and Therapeutics, The Chinese University of Hong Kong, Shatin, Hong Kong; and ⁵Department of Paediatrics, The Chinese University of Hong Kong, Shatin, Hong Kong

Background: Eltrombopag is a thrombopoietin receptor agonist that is increasingly being prescribed for the treatment of chronic thrombocytopenic conditions. Hepatotoxicity occurring in ~15% of patients necessitates regular monitoring of liver function. Depending in which hospital a patient is followed-up, serum bilirubin concentration for a single sample can vary by more than 8-fold, or 64 $\mu\text{mol/L}$, with the true concentration unknown.

Methods: Bilirubin was measured using up to nine assays including the Doumas Reference method and HPLC, for 66 samples from patients on 25–150 mg daily. Plasma/serum eltrombopag concentrations were determined using LC-MS/MS.

Results: There was a positive correlation between inter-analyser total bilirubin difference and plasma eltrombopag concentration ($r=0.679$). Spike-in experiments demonstrated that methods including the Doumas reference method were susceptible to positive interference. HPLC quantified bilirubin after separating eltrombopag, and results show that different analysers are affected to varying degrees by eltrombopag and its metabolites.

Conclusions: We are the first to demonstrate which bilirubin assays can accurately quantitate bilirubin concentration in patients on eltrombopag therapy. We are also the first to provide evidence that metabolites likely contribute to the interference. Resolution of inter-analyser discrepancies may prevent misdiagnosis of hepatotoxicity and improve our understanding of the prevalence of hyperbilirubinaemia in patients on eltrombopag therapy.

AN EIGHT YEAR REVIEW OF INTRAOPERATIVE FROZEN SECTION DIAGNOSES AND ITS LIMITATIONS

Jacqueline Cheung, Hui Yin, Kyaw Lynnhnhtun

Department of Anatomical Pathology, John Hunter Hospital, Newcastle, NSW, Australia

Background: Frozen section consultation (FS) is an integral part of surgical pathology to aid surgical colleagues in making an intraoperative management decision. This audit reviews the performance of FS diagnoses in a tertiary teaching hospital.

Objective: To perform an 8-year retrospective review analysing the concordance rate of FS compared with the final diagnosis on paraffin-embedded sections.

Methods: 2013 cases were received for FS from 1 January 2011 to 31 December 2018, comprising 3503 specimens. The patient's age, sex, specimen type, indication of the FS and the year performed were recorded. The diagnoses between FS and paraffin section were compared, especially for the discrepant cases.

Results: Of the 3503 specimens, 3288 results were concordant (93.86%). The major discordances occurred in 66 incidences (1.88%), the minor discordances in 68 specimens (1.94%) and the diagnoses were deferred in 81 cases (2.31%). Further analyses were performed on the major discordances. The true diagnostic error was seen in 26 specimens. Twenty-one incidences were due to undersampling, 17 specimens as a result of