DUAL P16/KI-67 IMMUNOCYTOCHEMICAL STAIN IN CERVICAL SMEARS: A TRIAGE COMPARISON WITH HPV TESTING, AND ALSO WITH BIOPSY DOUBLE IMMUNOLABELLING (DIL) FOR BENIGN/LOW GRADE LESIONS

Timothy Tay, Kah-Ling Lim, Maryam Hilmy, Sangeeta Mantoo, Timothy Tay, Kah-Ling Lim, Maryam Hilmy
Department of Pathology, Singapore General Hospital, Singapore

Testing for high risk human papilloma virus (HPV) subtypes has been incorporated to triage cervical smears with low grade (LG) squamous abnormalities, atypical squamous cells of uncertain significance (ASCUS) and low grade dysplasia (LGD), as many patients with these findings have infection without any accompanying high grade dysplasia (HGD). Addition of a dual p16/Ki-67 immunocytochemical stain (CINtecPLUS) potentially assists prediction of any HG lesion, thereby avoiding unnecessary colposcopy.

Comparison of sensitivity and specificity for detection of biopsy-proven HGD was made between the 3 modalities of Pap cytology, CINtecPLUS, and HPV testing in a total of 102 smears. CINtecPLUS was found to be the most sensitive method (93.8%) and more specific (76.3%) than HPV testing (21.1%). The most specific method was Pap cytology (89.5%).

Comparison of sensitivity and specificity for detection of HGD was made between the 3 modalities of CINtecPLUS, p16 alone, and DIL, in a total of 38 Pap-diagnosed cases of benign/LG lesions. The most sensitive was CINtecPLUS (91.7%), but with a specificity intermediate between DIL (88.5%) and p16 alone (65.4%).

Comparison of 7 CINtecPLUS +ve cases with DIL disclosed 2 totally discrepant cases, with confirmed -ve biopsies. Of 6 CINtecPLUS -ve cases, one totally and 5 partly discrepant cases were all LGD.

In conclusion, no single investigational modality demonstrated a clearly superior performance.

SCLEROSING POLYCYSTIC ADENOSIS OF THE PAROTID – A CASE REPORT WITH CYTO-HISTOLOGICAL CORRELATION

Janez Cernelc\(^1\), Eileen Long\(^1\), Karen Whale\(^1\), Chris Angel\(^2\)
\(^1\)Department of Anatomical Pathology, Royal Hobart Hospital, Hobart, Tas, and \(^2\)Peter MacCallum Cancer Centre, Department of Pathology, East Melbourne, Vic, Australia

Sclerosing polycystic adenosis (SPA) is a rare condition of salivary glands favoured to be a low grade neoplasm, rather than a reactive inflammatory process. While the histopathological features of SPA are well described, the cytological findings have been reported in a limited number of cases. We present the cytological and histological features of SPA in a 14-year-old female presenting with a parotid mass. Both the rarity of SPA, and the spectrum of morphological features which have considerable overlap with common benign (oncocytoma and Warthin’s tumour) and malignant salivary gland neoplasms (low grade mucoepidermoid carcinoma), make diagnosis on cytology difficult. We correlate the cytological findings with the resection histology, and outline discriminating features that may assist in the diagnosis of SPA.

GLOBLASTOMA WITH A PNET COMPONENT – REPORT OF AN EMERGING VARIANT WITH THERAPEUTIC AND PROGNOSTIC IMPLICATIONS

Janez Cernelc
Hobart Pathology, Hobart, Tas, Australia

Advances in molecular pathology have significantly improved our understanding of the biology of glioblastoma, and provide important prognostic and therapeutic information. A number of emerging variants of glioblastoma are increasingly recognised. Glioblastoma with a PNET component (GB-PNET) is a variant with a distinct morphological and molecular profile which affects tumour behaviour.

We present the intra-operative and resection findings of GB-PNET in a 38-year-old male presenting with nocturnal headaches and a temporal mass. We correlate the cytological findings with the resection histology, and outline discriminating features that may assist in diagnosis.

Glioblastoma with a PNET component is rare but is important to recognise due to its PNET-like behaviour, including a propensity for CSF dissemination and greater responsiveness to platinum based chemotherapy compared with standard glioblastoma chemotherapeutic regimens.

AUDIT OF DIAGNOSES OF NEONATAL RECTAL AGANGLIONOSIS DEMONSTRATES LITTLE ROLE FOR ACETYLCHOLINESTERASE HISTOCHEMICAL STAINING

C. Chambers, R. Lourie
Mater Pathology, South Brisbane, Qld, Australia

**Background:** Rapid and accurate assessment for aganglionosis is vital in potential neonatal HD (Hirschsprung’s disease). Haematoxylin and eosin (H&E) sections remain the method of choice for identification of ganglion cells (GCs). Positive acetylcholinesterase (AChE) staining and the absence in ganglion cells is considered gold standard for HD diagnosis. Our laboratory does not use AChE. We audited our performance at diagnosing HD on neonatal suction rectal biopsies to assess whether the introduction of AChE staining would improve diagnostic performance.

**Methods:** Neonatal suction rectal biopsies from 2011–2015 with no GCs identified were evaluated for follow up resection or clinical follow up. Biopsies noted to be inadequate by the reporting pathologist were excluded.

**Results:** Of 53 cases evaluated, all were confirmed on resection. 8 biopsies were excluded (6 inadequate, 2 no follow up). 1 case had a repeat biopsy showing GCs.

**Conclusion:** Optimal use of acetylcholinesterase staining would only marginally improve diagnosis of HD in this setting.