

Literature Update - Surgical Pathology
(Snippets in Surgical Pathology)
June 2009

Human Pathology, Vol. 40, No. 6, June 2009

- **Page 757:** The Weiss System is the standard for assessment and categorization of adrenal cortical tumors (after 25 years of the seminal publication). This review revisits the original criteria (1989): high nuclear grade, >5/50 HPF mitoses, atypical mitoses, <25% clear cells, >1/3 diffuse architecture, necrosis and invasion (capsular, venous, sinusoidal), with 3 or more corresponding to malignant behavior. The modified Weiss criteria published in 2002 permitted greater reproducibility: mitoses >5/50 H PF, clear cells <25%, abnormal mitoses, necrosis, capsular invasion. Note that both pediatric tumors (>400g, >10 cm, >15/20 mitoses) and oncocytic tumor (>10 cm, >200g) require a slightly modified approach.
- **Page 807:** An in-depth study of 16 cases of primary cutaneous NK/T cell lymphomas: CD3 positive, CD48 negative, CD56 positive, γ/β TCR negative, EBER positive, angiocentric with epidermotropism.
- **Page 904:** A comparison of p16 vs ProExC for cervical SILs reveals the following: p16 is more sensitive/specific for HSIL (see Human Pathol 2009 40:942) and ProExC is more sensitive/specific for LSIL (more diffuse/stronger than p16 and MIB-1). However, combined p16/ProExC provides the highest diagnostic value for both HSIL and LSIL.

Journal of Clinical Pathology, Vol. 62, No. 6, June 2009

A triplet of superb review papers addresses drug-induced injury in liver (481), skin (493) and kidney (505) written by specialists experienced in their art. A common thread that evolves from a humble generalist's purview is that all three organs may mimic ANY pattern of disease following drug-induced injury and that awareness of this possibility should always enter the differential diagnosis when reviewing biopsies from these organs with diseases of unknown etiologies. Further, a single drug may elicit a range of disease/injury patterns with no pattern specific for a particular drug (hence the overlapping histological pattern being a useful clue to potential drug-induced injury).

- **Page 530:** The frequently overlooked/underdiagnosed entity of peritoneal stromal endometriosis comprising superficial plaques/nodules of endometrioid-type stroma (without glands) is highlighted in this manuscript. Although typically associated with endometriosis (at other concurrent sites), the superficial location in a sub-mesothelial distribution incites these authors to hypothesize a metaplastic origin from mesothelial cells.

American Journal of Surgical Pathology, Vol. 33, No. 6, June 2009

- **Page 805:** A study reaffirming and validating the role of p57 IHC (with molecular genotyping confirmation) for the diagnosis of complete hydatidiform molar (CHM) pregnancy. Remember that p57 is negative in both the stroma and cytotrophoblast of CHM in the majority of cases (androgenetic diploidy). In contrast, p57 is positive in partial HM (diandric triploid), biparental diploid non-molar pregnancy and the rare CHM with trisomy 11 (with retained maternal allele).
- **Page 835:** As with mucoepidermoid carcinoma of the salivary glands, this investigation reveals a similar t11;19 in similar tumors of the uterine cervix (with aberration of at least one loci)! Importantly, adenosquamous carcinomas were negative.
- **Page 844:** Subdividing clear cell carcinoma of the ovary into cystic and adenofibromatous reveals that the latter presents more often in an advanced stage, less frequently with associated endometriosis and a poorer five year survival.

- **Page 925:** The clinical, gross and morphological features of MSI-H colon cancers are well described. This study provides selection criteria for identifying endometrial cancers from MMR IHC to identify patients with the Lynch/HNPCC Syndrome: <50 years, infiltrating lymphocytes (emphasizing intraepithelial lymphocytes), dedifferentiated carcinoma, and synchronous clear cell carcinoma.
- **Page 934:** In contrast, all sebaceous neoplasms should be routinely subjected to MMR IHC (regardless of age or clinical features) to identify patients with Muir-Torre Syndrome.
- **Page 945:** Some years ago, the cervical lesion of SMILE (stratified mucin-producing intraepithelial lesion: AJSP 2000; 24:1414-1419) was described and thought to arise from reserve cells with both squamous (p63 positive) and glandular (CEA positive) differentiation. This study describes a similar phenomenon in VIN with mucinous differentiation.

Histopathology, Vol. 54, No. 7, June 2009

- **Page 783:** Recent advances in refractory celiac disease (RCD) have revealed two cell population types: a polyclonal intraepithelial lymphocytes (IEL) population with a normal immunophenotype and a monoclonal IEL. The latter comprises an aberrant immunophenotype and may represent an early stage lymphoma (EATL). This paper reviews the clinical, IHC and molecular features of RCD.
- **Page 796:** The volume of metastatic melanoma in SLN is a strong predictor of disease recurrence and survival. These authors recommend step sectioning of LN with stereological assessment of the metastatic volume of tumor.
- **Page 814:** Much emphasis is placed (correctly so!) on the diagnosis of dysplasia in Barrett esophagus. What then is the natural history of low grade dysplasia (LGD) in BE? A study of 283 patients reveals that 20% persist, ~18% convert to indefinite status, and about 50% revert to non-dysplastic. Only 2.2% progress to high grade dysplasia/adenocarcinoma and only 1.4% to adenocarcinoma. Overall, LGD has a 3x risk of progression to cancer compared to non-dysplastic epithelia.
- **Page 854:** We are all familiar with the “tankards” of blood sinus washings that are filtered and processed for microscopy. The majority of fungal rhinosinusitis (FR) are non-invasive (~60%) with about 55% being allergic FR and approximately 5% a fungal ball. The remaining 35% of invasive FR are distributed equally between chronic invasive granulomatous inflammation and acute fulminant FR. Hence, the exact histopathological categorization of FR is an important component to patient treatment. Note that invasive FR is listed as a so-called “critical value” in surgical pathology, indicating an immediate call to the patient’s physician.

Modern Pathology, Vol. 22, No. 6, June 2009

- **Page 737:** Complying with the theme of drug-induced injury in the GIT (see JCP 2009; 62:481), mycophenolate mofetil (an immunosuppressive agent for bone marrow and solid transplanted patients) shows that a third comprises IBD-like injury and a third GVH-like changes. Almost 3% show ischemic-like and 16% self-limited colitis-like changes.
- **Page 824:** GPC3 (glypican 3) is a heparan sulfate proteoglycan that regulates cellular growth and apoptosis in the embryo, but is silenced in adult tissue, and is expressed as an oncofetal protein in HCC, melanoma and YST. This study adds clear cell carcinoma (44%) of the ovary to this list.

American Journal of Clinical Pathology, Vol. 131, No. 6, June 2009

- **Page 768/770:** A clear, concise, convenient summary of the clinical indications for HPV DNA test utilization in the management of SIL of the uterine cervix. An appropriate commentary accompanies the indications, allowing physicians/pathologists and all health care professionals involved in the management of these lesions/pre-neoplastic dysplasias to make the best choice for their patients, emphasizing benefit and minimizing harm: reminding us all of the Hippocratic oath “First do not harm”!
- **Page 788:** A review of eosinophilic esophagitis (EE) in adults between 1992-2004 reveals an increasing prevalence with pathologists providing an accurate diagnosis in the face of changing criteria. These authors used >15 E/HPF plus confirmatory clinical evidence to make a diagnosis of EE. Note that eosinophilic GE (EGE) is distinct from EE. Some interesting facets of EE are that the degranulating eosinophilic elicits fibrosis and that eosinophils are recruited by EOTAXIN (a gene that is highly induced in children with EE).
- **Page 802:** Deeper/multiple levels (3-4) of flat epithelial atypia (FEA) on needle core biopsy (NCB) of the breast frequently evolves into atypical ductal hyperplasia (ADH) (at the same site). Another illustration of the “power of deeper sections” in surgical pathology.

Archives of Pathology & Laboratory Medicine, Vol. 133, No. 5, May 2009

- **Page 950:** New variants of epithelial-myoepithelial carcinomas of the salivary gland: oncocytic-sebaceous and apocrine variants.
- **Page 973:** We have all assumed that most “floaters” on our glass slides in surgical pathology emanated from the water baths. This study surprisingly reveals that by far the majority of contaminants are in the staining baths and that the first set of xylenes and alcohols are most heavily contaminated.

Kumarasen Cooper, MBChB
Department of Pathology
University of Vermont
Burlington, Vermont 05401
E-mail address: Kum.Cooper@vtmednet.org