Case 11 – Histologic features

• Mostly high grade tubulovillous adenoma
• Area of adenocarcinoma with submucosal invasion
  • Breach through MM
  • Desmoplastic stroma
• Tumour budding
• Venous invasion
• Clear of margins
Case 11 – Adenocarcinoma arising in a tubulovillous adenoma

- What are the important features in a CAP specimen
  - Important prognostic features
  - Determining risk for a polyp

- Mimics of invasion in a polyp
Histological features to report

POLYPECTOMY AND LOCAL RESECTIONS
OF THE COLORECTUM
STRUCTURED REPORTING PROTOCOL
(1st Edition 2013)

What we do

• Tumour type:
• Differentiation:
• Adjacent adenoma type:
• Depth of invasion:
• Width of invasive component:
• Tumour budding:
• Haggitt/Kikuchi (pedunculated vs sessile) level:
• Poorly differentiated areas:
• Lymphatic invasion:
• Venous invasion:
• Clearance (carcinoma to margin):
Risk of lymph node metastasis

- The more adverse features present, the higher the risk of lymph node metastasis
  - Most important features are
  - **Size of the carcinoma**
    - Width >2 or 4mm
    - Depth >1 or 2mm
  - Areas of **poor differentiation**
  - **Lymphatic/venous invasion**
- Margin clearance predicts local recurrence

- The literature suggests that the overall rate of LN metastasis in these lesions is around 20%
  - At Envoi, our rate is 7% for all cancers removed as a polyp with a subsequent LN dissection
Misplaced epithelium / pseudoinvasion

- Mimic of invasion in a polyp
- Important to identify as this affects future treatment and prognosis
- Usually due to torsion/previous manipulation
  - Most often seen in pedunculated left sided polyps
- Features suggesting misplaced epithelium of invasive carcinoma
  - Smooth outline/lobular architecture of focus
  - Epithelium looks like overlying the lesion
  - Surrounding lamina propria/no desmoplasia
  - Haemosiderin and extravasated RBC
  - Extruded mucin/round mucin pools
Case 12  Male 66 – FOBT positive; 2cm sigmoid polyp
Case 12
Case 12 – Histologic features

- Pedunculated polyp
- Villous/frond-like architecture
- Small area of hyperplastic polyp at edge
- Ectopic crypt foci, slit like serrations
- Cytology of cells – pencillate nuclei, abundant eosinophilic cytoplasm
  - Minimal atypia
  - Occasional mitosis
Case 12. Traditional serrated adenoma

- Diagnostic criteria
  - Typical TSA cytology
    - Columnar cells with eosinophilic cytoplasm
    - Pencillate nuclei
  - Ectopic crypt formations
  - Slit like serrations

- Other features
  - Intraepithelial lymphocytes
  - Precursor lesion adjacent to the TSA
Clinicopathologic features of TSA

- <2% of colorectal polyps – rarest serrated polyp
- Anatomical distribution
- Genetic alterations
- Precursor lesions/Early TSA
- Progression to malignancy
Case 13  Female 81 – Caecal polypectomy
MLH-1 immunohistochemistry
Case 13 – Histologic features

- Serrated lesion – sessile serrated adenoma/polyp/lesion
- Areas with complex architecture, closely packed glands
- Cytological atypia and mitoses towards the surface of the epithelium
- Loss of MLH-1 on IHC – not supplied
Case 13 – Sessile serrated adenoma/polyp/lesion with cytological dysplasia

• Typical features of SSA/SSP/SSL
• Dysplasia in SSA
• Patterns of dysplasia in SSA-D
• MLH-1 in the diagnosis of SSA-D
• Serrated polyposis syndrome
Features of SSA
Morphological patterns of dysplasia

SSAD - unclassified
SSAD - serrated
SSAD - adenomatous
SSAD – minimal deviation
Pseudoinvasion in an SSA
Serrated polyposis syndrome

• Clinical features

• Diagnostic criteria

• Genetics of SPS
Case 14  Female 66 – Abdominal fullness; 4mm sigmoid polyp
Case 14 – Histologic features

• Spindled lesion in lamina propria of colon
• Surrounds colonic crypts – no expansile growth
• Cells have indistinct cell borders, bland wavy nuclei and eosinophilic cytoplasm
• S100 positive by IHC
Case 14. Schwann cell hamartoma

- Benign lesions of Schwann cell origin
- Can be seen anywhere in colon
- Usually incidental finding – polyp or nodule up to 5mm in size
- No syndromic association if solitary
- Other benign spindle cell lesions in the colon
  - Fibroblastic polyp
  - Ganglioneuroma
  - Neurofibroma
  - GIST
  - Leiomyoma of muscularis mucosae
Ganglioneuroma
Leiomyoma
Fibroblastic polyp
GIST
Case 15  Male 70 – Iron deficiency; EMR of polyp at anal verge
P16 – not supplied
Case 15 – Histologic features

- High grade tubulovillous adenoma
- Adjacent squamous mucosa shows full thickness atypia with mitotic activity
Case 15 – High grade Tubulovillous adenoma AND High grade squamous intraepithelial lesion

• Intramucosal carcinoma in the colon

• Terminology of dysplastic squamous lesions in the anal canal
  • LAST consensus terminology
  • AIN
  • ASIN

• Use of PI6
Thanks for listening

• Questions?

• Onto the next lecture