Envoi SPECIALIST PATHOLOGISTS *inside insights*

Update No.5 - 2019 *Dr C Rosty*

Updated WHO classification – colorectal serrated neoplasms

The 5th edition of the WHO Classification of Tumours of the Digestive System book was recently published (July 2019). There have been important changes in the nomenclature and histological criteria for serrated lesions/polyps of the large bowel. These are summarised below. The diagnostic clinical criteria for serrated polyposis have been updated from the previous 2010 edition.

WHO classification of colorectal serrated lesions and polyps

Definition: Colorectal serrated lesions and polyps are characterised by serrated architecture of the epithelium.

Classification:

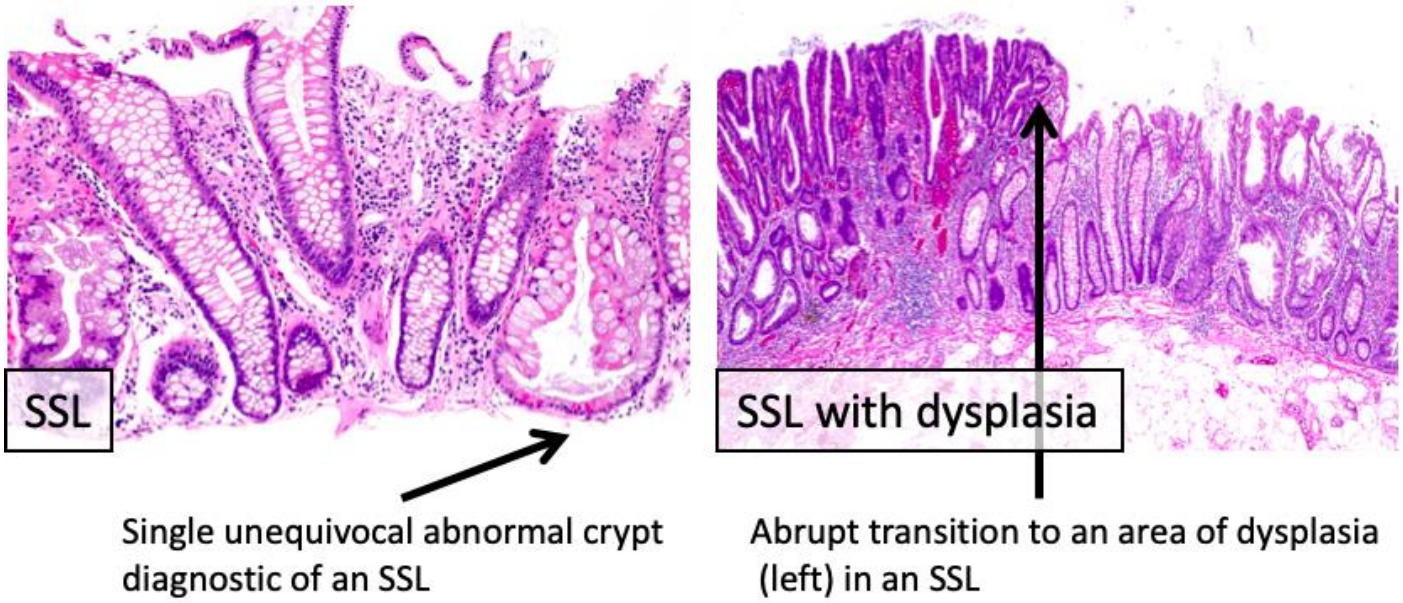
- Hyperplastic polyp (microvesicular and goblet cell rich subtype) (HP)
- Sessile serrated lesion (SSL)
- Sessile serrated lesion with dysplasia
- Traditional serrated adenoma (TSA)
- Unclassified serrated adenoma

Summary of changes:

- Sessile serrated lesion (SSL) is the new term for lesions formerly designated as sessile serrated adenoma (SSA). Clinical guidelines on the management of SSA apply for SSL.
- SSL with dysplasia is used for those lesions formerly called SSA with cytological dysplasia.
- Unclassified serrated adenoma has been introduced to be used for rare polyps difficult to classify as either SSL or TSA.

Histological criteria for sessile lesions and polyps:

- A single unequivocal distorted crypt is all that is required for the diagnosis of **sessile serrated lesion (SSL)**. The distortion of crypt architecture can include horizontal growth along the muscularis mucosae, dilatation of the crypt base, serrations extending into the crypt base and asymmetrical proliferation.
- Flat serrated lesions/polyps with no typical SSL-type crypt are diagnosed as **hyperplastic polyp (HP)** by exclusion. Mild symmetrical crypt dilatation, occasional branching and goblet cells at the base of crypts are insufficient for the diagnosis of SSL.
- A spectrum of morphological changes of **SSL with dysplasia** is now recognised. Stratification into low-grade and high-grade dysplasia is not recommended.
- The diagnosis of **traditional serrated adenoma (TSA)** requires two of the following features: (1) slit-like serration, (2) tall eosinophilic cells with pencillate nuclei and (3) ectopic crypt formations. Flat TSA in the proximal colon rarely have ectopic crypt formations.



Single unequivocal abnormal crypt diagnostic of an SSL

Abrupt transition to an area of dysplasia (left) in an SSL

Updated criteria for serrated polyposis

Compared with the previous WHO edition, only 2 out of the 3 clinical criteria remain for the definition of serrated polyposis (also called serrated polyposis syndrome or SPS). Serrated lesions/polyps in the distal colon and the rectum are now considered, with additional restrictions on number or size.

Criterion 1:

At least 5 serrated lesions/polyps proximal to the rectum

- all being ≥ 5 mm in size
- with ≥ 2 being ≥ 10 mm in size

Criterion 2:

More than 20 serrated lesions/polyps of any size distributed throughout the large bowel

- with ≥ 5 being proximal to the rectum

Patients fulfilling at least one criterion is diagnosed with serrated polyposis. Any subtype of serrated lesion/polyp as described above is included in the final polyp count. The polyp count is cumulative over multiple colonoscopies.

References:

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3. Pai RK, Bettington M, Srivastava A, Rosty C. An update on the morphology and molecular pathology of serrated colorectal polyps and associated carcinomas. Mod Pathol 2019.
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