

Mixed Serrated Polyps of the Duodenum

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Sir,

Serrated polyps are a recently described group of epithelial lesions of the colorectum characterized morphologically by serrations giving a saw tooth appearance.[1] They are classified as Hyperplastic polyp, Sessile serrated polyp/adenoma and traditional serrated adenoma in the 2010 WHO classification of Tumours of the Digestive System.[2] Hyperplastic polyps are more common in the distal colon and rectum, show serrations in the upper part of the crypts and are usually benign. Sessile serrated polyps/adenomas (SSA/P) are frequent in the proximal colon, have serrations involving the bases of the crypts and crypt architecture abnormalities including L-shaped or inverted T-shaped crypts with horizontal expansion. Molecularly, they show BRAF mutation, CpG island methylation (CIMP-H) and microsatellite instability (MSI-H). Traditional serrated adenomas (TSA) are rare distal colon and rectal serrated lesions showing villiform structures, ectopic crypt foci and eosinophilic cytoplasm. They show KRAS mutation and are CIMP-L.[3] SSA/P and TSA can progress to colorectal carcinoma and are associated with serrated pathway neoplasia.[3] Sometimes, these serrated polyps can be multiple and can present as serrated polyposis syndrome. [2] Serrated polyps are very rare in the duodenum and only few case reports TSA are described. No case of SSA/P has been described in the duodenum.

We recently diagnosed one case of 45 year female presenting with pain abdomen. The upper gastrointestinal endoscopy showed a large polyp in the second part of the duodenum measuring around 2.0cm with few surrounding smaller polyps measuring around 0.5cm (on gross examination, appeared to be 5-6 pieces, each showing polyps of different morphologies on microscopic examination). The largest

polyp showed features of traditional serrated adenoma with villous structures, ectopic crypt foci, elongated nuclei and eosinophilic cytoplasm. (Fig.1). One of the smaller polyps showed marked crypt serrations involving whole crypt length with abnormal crypt architecture including horizontal crypt (Fig.2) and it was diagnosed as sessile serrated polyp based on WHO criteria.[1,3] Two other smaller polyps showed features of tubulovillous adenomas. So the present case had multiple polyps of different morphologies.

Serrated adenomas were first described in the colon and rectum by Longacre and Fernoglio-Preiser[4] and Torlakovic et al[5] first described sessile serrated adenomas/polyps. Serrated polyps are rare in the duodenum. The first case of duodenal serrated adenoma was described by Rubio CA[6] in a case of familial adenomatous polyposis. Tubular, villous and tubulovillous adenomas were also identified. The largest case series of duodenal serrated adenomas (morphologically traditional serrated adenomas) comprising of 13 cases was described by Rosty C et al[7]. In this study, the authors described the morphological, immunohistochemical and molecular features of traditional serrated adenomas and concluded that duodenal serrated adenomas are different from that of colorectal because of absence of BRAF mutation. In the present case, molecular studies could not be done because of unavailability and this is the lacunae. However, both traditional serrated adenoma and sessile serrated polyps are described in this case which have previously not been described. This patient also had multiple polyps showing variable morphologies, so the same criteria which are used to define serrated polyposis syndrome in the colorectum can be applied in the duodenum is not clear.

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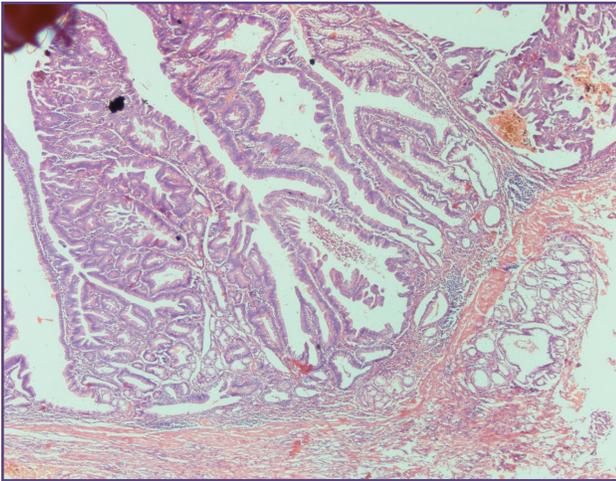


Fig. 1: Largest polyp showing prominent serrations, ectopic crypt foci and eosinophilic cytoplasm.

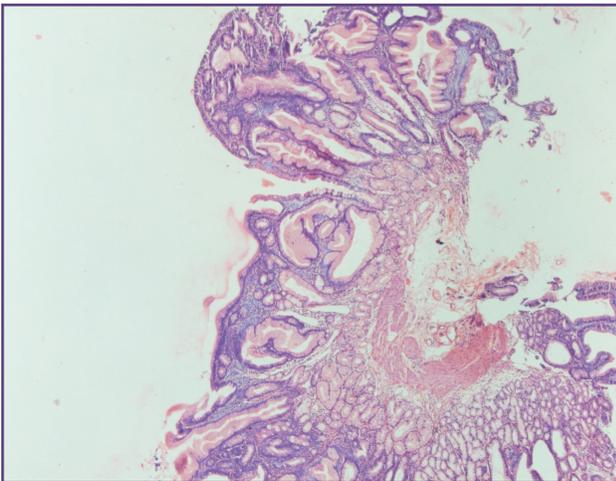


Fig. 2: Smaller polyp showing prominent serrations with horizontal crypts

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