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EDITORIAL

Portal hypertensive polyp—what is in a name?

C. Ganesh Pai

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Draining as it does into the portal venous system, it is not surprising that most of the gastrointestinal tract should show a variety of changes in portal hypertension (PH). The latest entry to this slowly lengthening list of abnormalities is the 'portal hypertensive polyp' (PHP), described in two reports in the current issue of this *Journal* [1, 2]. As with any newly described entity, a bevy of questions immediately comes up.

PHP have been reported to occur in the stomach and less commonly elsewhere in the bowel [3, 4]. They have most often been associated with cirrhotic PH but do occur in extrahepatic portal venous obstruction too [5]. Are they a distinct entity? The reports under review, dealing with gastric and duodenal lesions, and a handful of preceding ones make a case that they are. However, there have been no clear diagnostic criteria for PHP. Microscopically, gastric PHP have been diagnosed based on the presence of variable foveolar hyperplasia of the epithelium along with underlying vascular proliferation. So the question arises: are these lesions unique to PH or do they simply represent hyperplastic polyps arising on a background of vascular changes of PH such as portal hypertensive gastropathy (PHG) or gastric antral vascular ectasia (GAVE)? The latter possibility certainly cannot be ruled out. In their retrospective analysis, on 631 patients with PH, Amarapurkar et al. found gastric and duodenal polyps in 16 (2.53 %) patients. Nine of these were diagnosed as PHP, six as hyperplastic polyp, and one as fundic gland polyp. On comparing PHP with PHG mucosa devoid of polyps, the authors found that the density and diameter of capillaries in the lamina propria were similar but that such changes were significantly more frequent ($p<0.001$) in these two groups compared to polyps in patients without PH. The morphometric and special staining characteristics of PHP presented in the paper do not provide any support to the contention that the vascular changes seen in PHP are distinct from those seen in PHG or GAVE. Nor does the comparison, less detailed nonetheless, between hyperplastic polyps and PHP as reported by Lam et al. in an earlier report confirms that these two lesions are distinct. Did the six hyperplastic polyps reported by Amarapurkar et al. differ from the PHP in any characteristics other than the vascularity? The paper does not comment on this. Again, there was no difference in the age, gender, the frequency of polyps, and their histological types in the portal hypertensive and non-portal hypertensive groups. The fact that the prevalence of all types of polyps in the portal hypertensive and non-portal hypertensive group (2.53 % vs. 3.3 %, $p=0.4$) was similar also casts doubts as to whether these are unique lesions developing in the presence of PH over and above the other types of polyps seen in the general population. Also, PHP in the stomach and those in the small bowel may not show similar histological features except for the increased, dilated subepithelial capillaries. For example, some earlier reports pertaining to PHP elsewhere in the bowel are less clear about the epithelial changes but stress the presence of vascular changes only [4, 6, 7].

If PHP are unique lesions indeed, how frequently do they occur in PH? In a retrospective study from Canada, only 12 cases were identified over 20 years [3]. The two studies under review, only one of them prospective, found PHP in 1.01 % to 2.53 % of patients undergoing upper endoscopy for PH over 15–33 months [1, 2]. PHP are, therefore, not really uncommon, and while gastroscopy has been a routine diagnostic procedure in PH for decades now, PHP has clearly remained unappreciated till recently. For example, a recent retrospective analysis of 611 patients undergoing screening gastroduodenoscopy in cirrhosis over 40 months revealed gastric and duodenal polyps in 20 (3.3 %) and 5

C. G. Pai (✉)
Department of Gastroenterology and Hepatology, Kasturba Medical College, Manipal University, Manipal 576 104, India
e-mail: cgpai@yahoo.co.in

(0.8 %), respectively. While the histological subtypes in these patients included hyperplastic polyps, adenomas, and xanthomas, there was no mention of PHP [8].

What is the best way to diagnose this condition? Endoscopic features are obviously insufficient. Are mucosal biopsies adequate or do we need to resect all gastroduodenal polyps for diagnosis? Resection of gastric polyps appears to carry a higher risk of complications even in those without PH [9]. In those with PH, the risk of excess bleeding because of coagulopathy and the possibility of inadvertently snaring other similar lesions such as isolated gastric varices cannot be ignored. On the other hand, there is evidence to suggest that patients with cirrhotic PH may not carry a higher risk of bleeding after polypectomy compared to those without, though these data are mostly on colonic polyps [10]. Mucosal biopsies may be inadequate for the complete evaluation of gastric polyps though current recommendation is to restrict polypectomy only those with symptoms or a clear risk of future malignancy [9, 11]. A reasonable approach would be to do mucosal biopsies initially and polypectomize only those lesions which clearly merit this procedure.

The etiopathogenesis of PHP can only be speculated on at present, given the scanty data available. Reactive changes to the increased vascularity of PH, proton pump inhibitor use, and *Helicobacter pylori* infection have all been suggested as possible causative factors. Equally speculative is their potential to transform into malignancy. Given their histological resemblance to hyperplastic polyps which are now considered to harbor such a risk, these lesions may be expected to behave similarly [12]. The fact that there is no known increase in the risk of gastric cancers in cirrhosis or PH is reassuring for the present.

How significant are these lesions to the practicing clinician? Neoplastic lesions such as adenomas and vascular lesions such as gastric varices need to be ruled out. Also, some reports have implicated PHP in continuing blood loss after eradication of varices though the data provided are insufficient to conclude this definitely [2, 4, 6]. Given their small size, they may not cause obstructive symptoms, which anyway are uncommon with gastroduodenal polyps.

Clearly, further studies are needed in a number of areas to answer the new questions that these two reports on PHP have raised.

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