

Sporadic nonampullary tubular adenoma of the duodenum: Prevalence and patients' characteristics

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Dear Editor,

Sporadic Nonampullary tubular adenomas (SNADAs) of the duodenum are infrequently encountered during routine upper endoscopic examination (1-3). Despite their rarity, the clinical value of these polyps stems from the potential of progression to adenocarcinoma (2). The prevalence of SNADAs in the Middle East remains unknown. Therefore, a retrospective study was conducted to find the prevalence of SNADAs in patients who presented for routine upper endoscopic examination at a single center and to compare patients with SNADA with those with other types of nonampullary duodenal polyps. The institutional review board approved the study.

We reviewed the endoscopic records of patients who presented for upper endoscopic examination between May 2015 and Nov 2017. Data collected included patient's demographics, indications and findings of upper endoscopic examinations, pathology reports and pertinent clinical information.

Point estimates and interval estimates are reported for all descriptive data and are presented as mean \pm the standard deviation. Categorical data were reported as frequencies (n) and percentages (%). Student's t-test was used to compare means and Fisher's exact test was used to compare categorical variables. Statistical significance were defined as $p < 0.05$.

Overall, 5,777 unique upper endoscopic examinations were reviewed. The procedures were performed by sixteen endoscopists (12 gastroenterologists and 4 surgeons). One case of ampullary adenoma was excluded. Thirty-four duodenal polyps were detected (0.59% of all upper endoscopic examinations). Another case was excluded from further analysis because the duodenal

polyp was not sampled for pathological examination. The remaining polyps (n=33) were endoscopically removed either by using a cold biopsy forceps when the polyps were small or a snare when the polyps were large.

In total, 6 cases of SNADAs, out of 33 resected duodenal polyps, accounted for the prevalence of 0.10% of all upper endoscopic examinations. Five SNADAs were found in the second portion of the duodenum and one in the fourth portion of the duodenum. None of the patients with SNADAs were diagnosed with familial adenomatous polyposis.

Pathological examination showed that one of the tubular adenoma polyps exhibited high-grade dysplasia, while the remaining exhibited low-grade dysplasia. The patient who was found to have a tubular adenoma polyp with high-grade dysplasia presented initially for evaluation of iron-deficiency anemia. Video capsule endoscopy showed a distal duodenal polyp. Thus, we performed upper endoscopy, and the polyp was resected from the fourth part of the duodenum.

Microscopic examination of the nonadenomatous polyps (n=27) led to a variety of findings duodenitis/inflammatory polyp (n=10), normal duodenal tissue (n=7), gastric heterotopia (n=4), Brunner's gland hyperplasia (n=2), hyperplastic polyp (n=1), leiomyoma (n=1), lipoma (n=1), and vascular ectasia consistent with portal hypertensive duodenopathy (n=1).

Indications for upper endoscopic examination among patients who were found to have duodenal polyps were variable and overlapped and included abdominal pain/dyspepsia (n=17), suspect GERD (n=7), dysphagia (n=4), anemia (n=4), cirrhosis (n=2), suspect celiac disease (n=2), chronic diarrhea (n=1), and weight loss (n=1).

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The present investigation revealed a high prevalence of polyps that are either inflammatory or covered by normal duodenal tissue, which is consistent with the findings of previously published studies. For example, the prospective study authored by Jepsen et al found around 48% of the duodenal polyps to be either inflammatory or covered by a normal duodenal tissue (4). In addition, a more recently published study reported similar findings: 60.2% of all resected duodenal polyps pathology revealed either normal pathology (45.2% of all resected duodenal polyps) or inflammatory polyps (14.9% of all resected duodenal polyps) (5).

Furthermore, the present study compared the characteristics of patients with SNADAs to those with nonadenomatous duodenal polyps. There was no significant difference between the mean age of the two groups (52.7 ± 11.7 years vs. 52.3 ± 12.7 years, $p=0.92$). The SNADAs tend to affect males more frequently (66.7% vs. 44.4%, $P = 0.4$). In addition, compared to nonadenomatous duodenal polyps, SNADAs affect the postbulbar area significantly more than the bulb (100% of adenomatous polyps affected the postbulbar area vs. 25.9% of nonadenomatous polyps affected the postbulbar area, $p<0.002$). Moreover, SNADAs are significantly larger in size than other benign duodenal polyps (11.3 mm vs. 3.5 mm, $p<0.003$).

In this study, the prevalence of SNADAs was 0.1%. In comparison, a large German retrospective study found the prevalence of SNADAs to be 0.1% (2,3). Another retrospective study from South Korea reported the prevalence of SNADAs to be 0.03% (4). A prospective study from Denmark found the prevalence of duodenal tubular adenoma polyps to be 0.4% (5).

In conclusion, the calculated prevalence of SNADAs in the Middle East is similar to that which is reported in the literature regarding the prevalence of SNADAs in the Western countries. The findings of this study suggest that tubular adenoma polyps, compared to other duodenal polyps, tend to be larger in size. Also, the finding of a polyp in the postbulbar area should raise the suspicion of tubular adenoma.

Peer-review: Externally peer-reviewed.

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