Concurrent Diagnosis of a Gastric Neuroendocrine Tumor and an Adjacent Adenoma: An Approach to Diagnosis and Management

Michael Kwan

Abstract

Gastric Neuroendocrine Tumors (NETs) have historically been classified as rare tumors of the foregut However, with the increased use of diagnostic endoscopy and improved awareness of these tumors, the incidence of these tumors has been increasing Gastric NETs now account for 0.6%-2% of all gastric polyps [4]. Type 1 carcinoids represent 70%-80% of gastric NETs and are associated with chronic atrophic gastritis. Endoscopically, they are usually polypoid, small in size, multicentric and can be mistaken for erosions or adenomas Narrow-band Imaging (NBI) with magnifying endoscopy has been used to describe a disappearance of normal pit structure centrally with a yellowish hue underneath the epithelium Gastric adenomas are dysplastic, neoplastic precursors to gastric cancer that account for 6%-10% of all gastric polyps in Western populations and up to 25% in Asian populations [7,8]. Endoscopically, they appear lobulated, flat or sessile and can range from a few millimeters to centimeters in size Under magnifying chromoendoscopy, gastric adenomas were classified as having a long tubular pit pattern in the absence of dysplasia [10] and absent mucosal patterns with irregular vascular patterns with dysplasia [11]. They are most commonly located in the antrum and are solitary. Whereas non-malignant adenomas originate and are generally confined to the mucosa, gastric NETs invade the sub mucosa [12]. Awareness of this distinction is especially important prior to embarking on attempted endoscopic resections of these lesions as traditional resection techniques can result in inadequate margins or perforation [13]. With the rising incidence of gastric NETs, the diagnosis and management of these tumors become increasingly relevant for all endoscopists. Thus, we describe a case of a patient presenting with a concurrent diagnosis of gastric NET adjacent to a gastric adenoma. The endoscopic descriptions of each and experience with their subsequent resections is contrasted and discussed.

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Narrow-band Imaging (NBI) with magnifying endoscopy has been used to describe a disappearance of normal pit structure centrally with a yellowish hue underneath the epithelium [6]. Gastric adenomas are dysplastic, neoplastic precursors to gastric cancer that account for 6%-10% of all gastric polyps in Western populations and up to 25% in Asian populations [7,8]. Endoscopically, they appear lobulated, flat or sessile and can range from a few millimeters to centimeters in size [9]. Under magnifying chromoendoscopy, gastric adenomas were classified as having a long tubular pit pattern in the absence of dysplasia [10] and absent mucosal patterns with irregular vascular patterns with dysplasia [They are most commonly located in the antrum and are solitary. Whereas non-malignant adenomas originate and are generally confined to the mucosa, gastric NETs invade the sub mucosa .Awareness of this distinction is especially important prior to embarking on attempted endoscopic resections of these lesions as traditional resection techniques can result in inadequate margins or perforation.

Gastric NETs are rare foregut neoplasms. The concurrent presentation of a gastric NET with a gastric adenoma in the same patient is even more uncommon, providing a unique opportunity to contrast their respective endoscopic appearances and subsequent resections. In this case, the gastric adenoma had an area of architectural loss of mucosal pattern and irregular vascular pattern with magnified NBI. In contrast, the NET had a normal overlying pit pattern consistent with the surrounding unaffected gastric mucosa but exemplified an underlying yellowish hue. The appearance of both of these lesions is consistent with previous descriptions Gastric adenomas are typically confined to the mucosa making subsequent resections relatively straightforward. In this case, the adenoma lifted well off of the muscle and was resected without issue. Gastric NETs differ from this in that they have a tendency to involve the submucosal layer. Figure 2C exemplifies this issue clearly and ultimately, ESD was required for its resection. Through this case, the importance of distinguishing between gastric NETs and adenomas prior to embarking on endoscopic resection is shown. In the event of a NET diagnosis, the requirement of a more complex resection with increased risk needs to be considered by the endoscopist and relayed to the patient.

Michael Kwan

Department of Gastroenterology, Lyell McEwin Hospital, South Australia, Australia, E-mail: kwan.mike@gmail.com