Introduction

Gastric hamartomatous inverted polyp (GHIP) is a rare form of gastric polyp. The accurate diagnosis of GHIP is difficult preoperatively because the main lesion is located in the submucosa or within the muscularis mucosae. Here, we report the successful resection of a submucosal tumor (SMT) – type GHIP by endoscopic submucosal dissection (ESD).

Case report

A 55-year-old woman presented after a gastric tumor in the greater curvature of the upper gastric body had been detected incidentally on an upper gastrointestinal X-ray series performed during a routine medical examination. Endoscopy revealed a gastric SMT measuring 15 mm in diameter in the greater curvature of the upper gastric body. The elevated lesion was covered with normal mucosa, and an irregular depression was evident at the top of the SMT (Fig. 1). Endoscopic ultrasonography (20 MHz) showed a heterogeneous tumor with small, cystic, anechoic spots originating from the second layer, indicating that the main lesion was located in the deep mucosal layer or within the muscularis mucosae (Fig. 2). A biopsy specimen from the depressed area showed no neoplastic changes. The patient was clinically asymptomatic, with no contributory family history or abnormal laboratory data. The results of a physical examination, abdominal computed tomography, and plain chest radiography were all unremarkable. Although the endoscopic tumor type was determined to be SMT, the tumor was successfully resected by endoscopic submucosal dissection (ESD) and subsequently diagnosed as a gastric hamartomatous inverted polyp (GHIP). The findings of the present case highlight the importance of considering GHIP as a diagnosis and indicate the utility of en bloc resection of GHIP with ESD.

Discussion

GHIPs account for fewer than 1% of all gastric polyps [1]. GHIPs are usually found as a part of
Peutz–Jeghers syndrome or Cowden disease but are rarely solitary or asymptomatic [2]. GHIPs are characterized pathologically by cystic, dilated, hypertrophic pseudopyloric gland proliferation and by smooth-muscle fibers located in the submucosal layer, with branching from the proliferation of smooth-muscle bundles. The main lesion in GHIP is located in the submucosa or within the muscularis mucosae [3].

GHIPs are difficult to diagnose accurately without endoscopic or surgical resection and subsequent pathological investigation because of the inverted growth into the submucosal layer [4]. GHIPs without a stalk are classified as of the polyp type. Polyp-type GHIPs can be resected endoscopically by conventional EMR, but conventional EMR has been reliable for resecting SMT-type lesions in one piece only if the lesions have a diameter of 10 mm or less. For SMT-type lesions larger than 10 mm in diameter, surgical resection and subsequent pathological investigation are evident at the top of the SMT. The tumor was found incidentally in a 55-year-old woman on an upper gastrointestinal X-ray series performed during a routine medical examination.

In our patient, the diameter of the SMT was about 15 mm, so we selected ESD rather than conventional EMR to achieve a complete en bloc resection and obtain an accurate pathological diagnosis. According to a search of the PubMed database, only four reports have described GHIP removal by ESD [4, 7–9]. The resection of an SMT-type GHIP by ESD is thus quite rare. An accumulation of case reports for the endoscopic resection of GHIP is important, although the endoscopic and endoscopic ultrasound findings were relatively typical in the present case. ESD can provide sufficient tissue for an accurate pathological diagnosis following complete en bloc resection. We therefore think that for an accurate diagnosis of GHIP, en bloc resection with an ESD method is warranted.

Competing interests: None

References
4 Hirohito M, Hideki K, Takaaki T et al. Two rare gastric hamartomatous inverted polyp cases suggest the pathogenesis of growth. World J Gastroenterol 2014; 20: 5918–5923