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**Research Article**

## A RESEARCH STUDY TO ANALYSE A RARE DUODENAL MASS, BRUNNEROMA

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**Abstract:**

***Objective:** To analyze a rare duodenal mass, brunneroma.*

***Place and Time of study:** Jinnah hospital, Lahore from Feb 2018 to Jan 2019.*

***Methodology:** The case is around a 65 years of age female. She was given ileus following laparoscopic cholecystectomy. Positron emanation tomography (PET) CT examination with an institutionalized take-up worth (SUVmax) of 6 demonstrated a potential threat. For conclusion of BGA, endoscopic ultrasonography and differentiated tomography can be utilized. On account of non-symptomatic and unexpectedly identified duodenal masses, be that as it may, PET-CT would be helpful. In symptomatic cases, trans-duodenal resection can be performed. Contrastenhanced stomach tomography (CT) had prior been connected to decide the basic reason for ileus. In upper gastric endoscopy, sub-mucosal found mass was seen in the principal area of the duodenum at the back divider, which was not hindering the entry of endoscope. A hypo-dense 52 × 32 mm estimated mass was by chance identified in the first and second areas of duodenum. As the patient's clinical condition exacerbated, exploratory medical procedure was planned. Pathological examination uncovered hyperplastic Brunner's organs, which was viewed as Brunner's Gland Adenoma. As for this situation, gastrointestinal framework tumors with a SUVmax more noteworthy than 5 isn't constantly related with harm. Little inside bonds and strangulation were recognized. Trans-duodenal biopsy was taken. Patient was released at postoperative day 12 with fix. Taking everything into account, patients with BGA ought to be followed-up for danger and repeat. For ordinary circumscribed mass pictures, which are identified at this restriction, BGA ought to be remembered for differential conclusion.*

***Keywords:** Duodenal Mass; Brunner's Gland Adenoma; Brunneroma*

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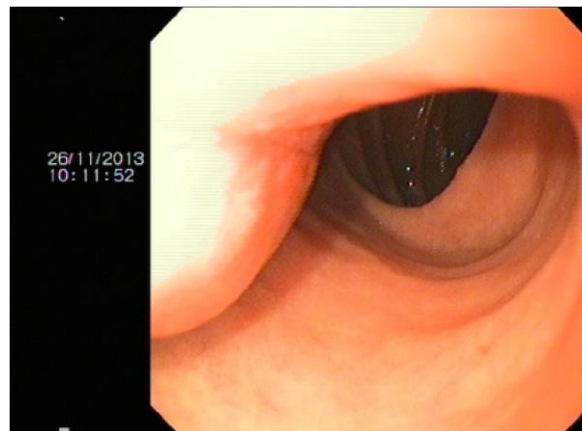
**INTRODUCTION:**

Brunner's organ adenoma was identified by chance during examinations of the patient. Brunner's organ adenoma (BGA) is an uncommon favorable polypoid sore of duodenum [1]. The most widely recognized appearances of BGA are obstacle and upper gastrointestinal hemorrhage [2]. It is generally

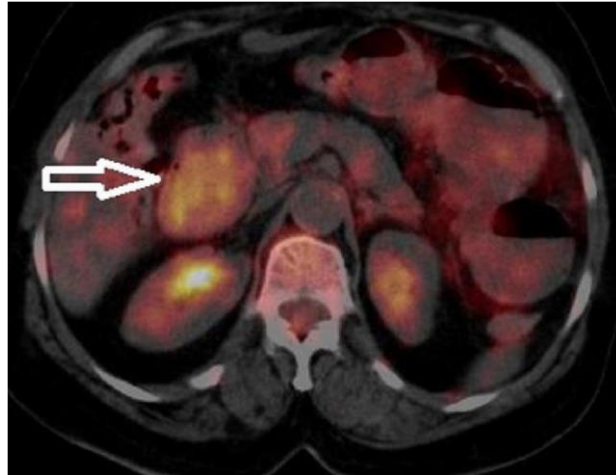
asymptomatic and disconnected. It is commonly situated in the first and second segments of duodenum [2]. The patient had post-employable ileus; finding, treatment, follow-up of this adenoma was assessed through the hunt of writing. We reported our experience.



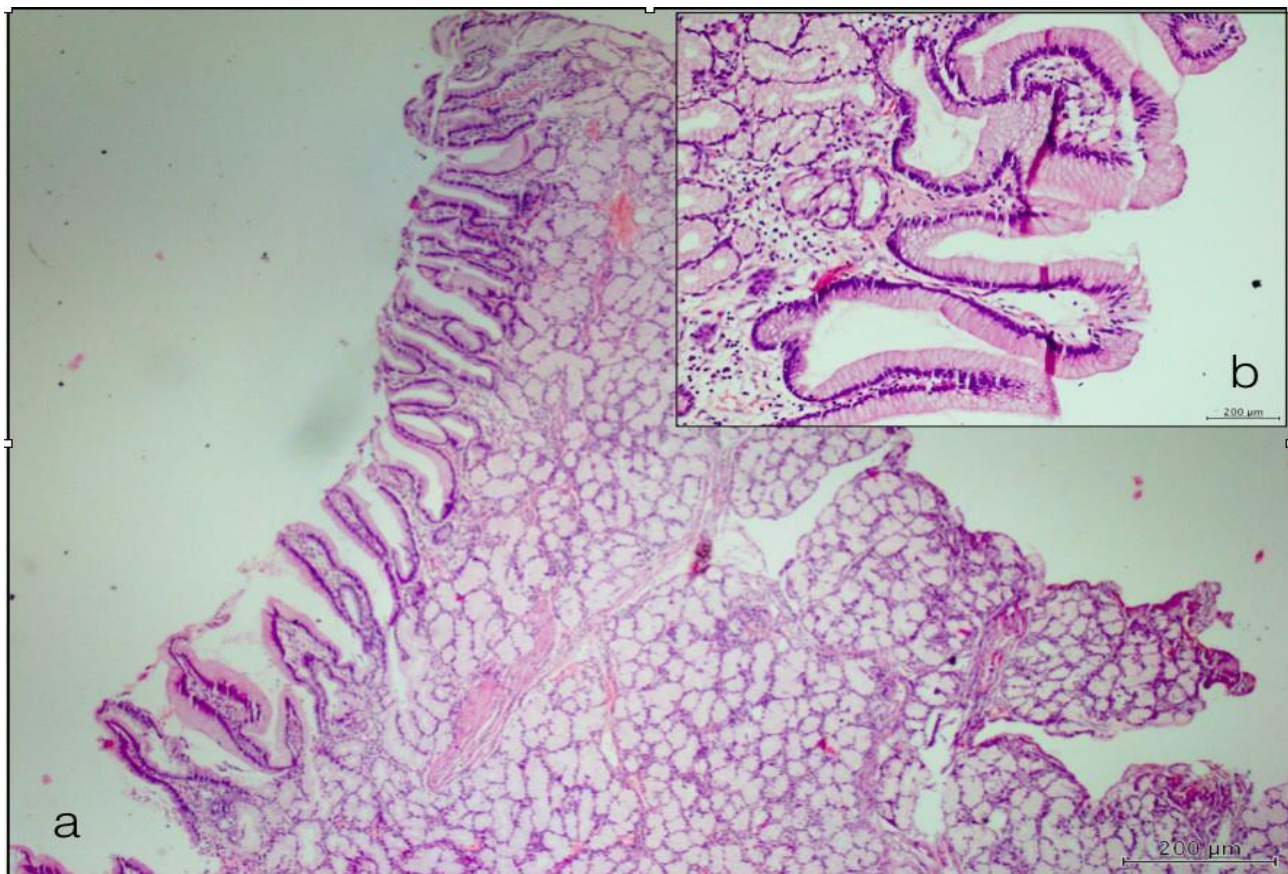
**Figure 1:** The coronal (a) and axial (b) CT sections of the smoothly contoured, hypodense mass lesion extending from the first section of duodenum ( Asterisk) to the second (arrow ).



**Figure 2:** Upper gastric endoscopy; submucosal located mass was observed



**Figure 3:** PET-CT axial image; a heterogeneous (18F)-fluorodeoxyglucose uptake of duodenum (arrow) with a standardized uptake value (SUVmax) of 6.



**Figure 4:** Hematoxylin-Eosin staining of the specimen (a and magnified in b). Photomicrograph of pylorus shows hyperplastic Brunner's glands in submucosal region separated by fibrous septa (a) extending towards to the luminal surface (b).



**RESULTS:**

This examination was around a 65 years of age female. She was moved to jinnah hospital. The patient was determined to have ileus following laparoscopic cholecystectomy. . A hypodense 52 × 32 mm estimated mass contiguous head of pancreas, beginning from pylorus and appearing at the first and second segment of duodenum, was distinguished (Figure 1a and 1b). Obsessive examination of endoscopic biopsy uncovered hyperplastic polyp. There was no proof of ileus before cholecystectomy. Differentiation upgraded stomach tomography (CT) had prior been connected to decide the fundamental reason for ileus. In the upper gastric endoscopy, sub-mucosal mass was seen in the principal segment of the duodenum at the back divider, which was not hindering the entry of endoscope (Figure 2). Positron outflow tomography (PET) CT examination appearing heterogeneous (18F) fluorodeoxyglucose take-up with an institutionalized take-up worth (SUVmax) of 6 uncovered a potential danger (Figure 3). Patient's ileus improved. Clinical condition deteriorated. Along these lines, exploratory medical procedure was arranged. So as to analyze duodenal mass, trans-duodenal biopsy was taken. During the medical procedure, little inside attachments and strangulation were recognized at umbilical area underneath the old trocar scar. Pyloric and duodenal fix was performed with Hainke-Mikulicz pyloroplasty. Ten cm of small digestive system was resected, and start to finish anastomosis was performed. He mass was sub-mucosal found, wide based, smooth surfaced and yellowishgreyish shaded with medium hardness. Obsessive examination indicated hyperplastic Brunner's organs in sub-mucosal district isolated by stringy septa, reaching out towards to the luminal surface (Figure 4). Biopsy was taken from mucousal film with a wide extraction while safeguarding sub-mucosa. It was viewed as BGA. The patient was released at postoperative day 12 with fix. There was no case improvement, rot, drain, vascularization and atypic cells in histo-pathological examination of the mass (Figure 4).

**DISCUSSION:**

Brunner's organs are mucin-discharging organs, and situated in duodenum. They are commonly asymptomatic and can be distinguished by chance. Endoscopically, they develop as a polypoid to the lumen at the first and second areas of duodenum, and they are for the most part 1-3 cm measured masses, which can be viewed as mucosa-secured swell. Their area begins from pylorus and consolidates at first and second segments of duodenum. In the third and fourth parts of duodenum, their power decline. In proximal jejunum, they can once in a while be found [1]. For

analysis, endoscopic ultrasonography and differentiated tomography can be utilized. Endoscopy helps both determination and treatment. In symptomatic cases, there can be side effects, for example, obstacle, dying, and intussusceptions of the upper gastrointestinal framework and pancreatitis [1-6]. On account of non-symptomatic and by chance distinguished duodenal masses, PET-CT would be helpful. A SUVmax below 2.3 indicated a considerate mass. In symptomatic cases, which are not appropriate for endoscopic extraction, trans-duodenal resection can be performed [1-6]. By discharging bodily fluid, pepsinogen and urogastrone, they help to shield the stomach from acidity [1-2]. Inordinate discharge of corrosive may assume job in the pathogenesis of Brunneroma [1-3]. Different components are uremia, interminable pancreatitis and helicobacter pylori [4]. For our situation, trans-duodenal mass extraction was performed with laparotomy because of post-usable ileus. While taking biopsy for finding, sub-mucosal resection was performed, pylorus and duodenum was broadened with pyloroplasty. At the point when the aftereffect of biopsy uncovered BGA (Figure 5), the patient was taken to a nearby development. There was no repeat in two-year development. Goldman portrayed Brunner's organ hypertrophy, later to be named Brunneroma, was in reality a range of changes that were neither hyperplastic nor neoplastic but instead proliferative hypertrophy [5]. In this hypertrophy, there is hyperplastic organ multiplication isolated by stringy septa. On the off chance that this hypertrophic organ incorporates mesenchymal components, for example, muscles, organs, fat segments, and structures containing the pancreas asinus and ductus, they are named hamartoma [3, 5-7]. It is known as a kindhearted injury. Still there are uncommon cases that have adenocarcinoma in this organ. Be that as it may, as these cases are uncommon, this discussion is still doubtful [7-8]. A SUVmax below 2.3 indicate a benign mass. A SUVmax of more than 5 in PET-CT have a high danger of malignancy [9]. For this situation, a SUVmax of 6 did not demonstrate a defame mass. Park et al. revealed that gastrointestinal framework tumors with a SUVmax more prominent than 5 were not constantly related with malignancy [10]. By and by, cases with duodenal masses ought to be followed-up intently for uncommon harm improvement risk [8, 10].

**CONCLUSION:**

It is inferred that patients with BGA ought to be followed-up for harm and repeat. For customary flanked mass pictures, which are distinguished at this confinement, BGA ought to be remembered for differential conclusion. Brunner's organ adenoma is an

uncommon injury of duodenum, and it very well may be seen at the back mass of the first and second areas of duodenum.

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