

Case Report


Dieulafoy's lesion – A rare case of jejunal aneurysm

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Abstract

Despite being a rare condition, Dieulafoy's lesion, also known as the persistent artery, is a serious cause of gastrointestinal bleeding. Only 1–2% of acute gastrointestinal bleeding is caused by it. Most commonly affects the stomach and duodenum, rarely affecting jejunum, ileum, caecum, etc. Our case presents a 21-year-old male who presented with lower gastrointestinal bleeding secondary to jejunal dieulafoy's lesion.

Key words

Dieulafoy's lesion, Gastrointestinal bleeding, Persistent artery.

Introduction

Dieulafoy's lesion was named after the French surgeon Paul Georges Dieulafoy, who initially defined this ailment as "Exulceratio Simplex" in 1898 despite the fact that Gallard first observed it in 1884 [1, 2]. The submucosal artery is abnormally dilated in this rare vascular abnormality (1-3 mm). These lesions can be detected all through the gastrointestinal tract, however, stomach is where they appear most frequently [3, 4]. The proclivity is attributed due to rich blood supply. It is usually diagnosed by

Upper GI endoscopy. When patient presents with bleeding, most cases require minimally invasive procedures such as endoscopy or angiography. A few cases require surgery.

Case report

A 21 year old male presented to our hospital with complaints of ongoing melena since 4 months, generalised weakness and shortness of breath since 3 months. He gave a history of admission for same complaints 3 months back and was given blood transfusion in view of severe

anaemia (Hb – 3gm/dl), conservatively managed and discharged. Due to recurrence of symptoms, he again presented to our hospital.

On examination, he was pale with stable vitals and had black stools on rectal examination. Blood analysis revealed Hb of 2.5gm/dl, Stool for occult blood was positive. He received 5 units of packed cell transfusion, followed by Upper GI endoscopy. Upper GI endoscopy was found to be normal. CT angiography revealed a 6.9 x 7.7 mm contrast filled out pouching arising from jejunal branch of superior mesenteric artery lying with in wall of jejunal loop in left hypochondrium – Small Jejunal Aneurysm.

Colonoscopy showed Normal mucosal study up to Terminal ileum. Enteroscopy was done as a diagnostic and therapeutic procedure, but the active site of bleeding could not be visualized. In view of the failure of enteroscopy, the patient was planned for Diagnostic laparoscopy and proceeded. Exploratory laparotomy was done, intra-operatively, and a 6 mm lesion was palpated 40cm from the ligament of treitz in the anti-mesenteric border. Resection was done 3 cm proximal and distal to the site of the aneurysm.

Intra-operative enteroscopy was done – which revealed empty proximal bowel and blood clot-filled distal bowel without any lesion (**Photo – 1**).

The primary anastomosis was done and the patient was discharged on postoperative day 3 with an uneventful post-operative period (**Photo – 2**). Histopathology reported as “Benign Ulcer” (**Photo – 3**).

Discussion

Gastrointestinal bleeding is one of the most common medical emergencies in world, with an incidence of 50 – 150 per 1 lakh individuals each year [3]. Upper GI bleeding is four times more common than lower GI bleeding. 80 % of GI bleeding are due to ulcerations, varicose or

angiectasis with occult hemorrhage in less than 5% of cases.

Photo – 1: Intraluminal collection.



Photo – 2: Filling of blood – Affected segment.



Photo – 3: Histopathology reported as “Benign Ulcer”.



Dieulafoy's lesion, also known as calibre persistent artery is a rare vascular malformation. Despite its rarity, it is being increasingly reported due to the widespread use of endoscopy. The lesion is defined anatomically as dilated, aberrant, a submucosal artery that erodes overlying gastrointestinal mucosa in a case of underlying ulcer, aneurysm, or intrinsic mural

abnormality [1]. Unlike the normal arterial tree, progressively narrowing when approaching distal branches, dieulafoy's lesion maintains a constant arterial caliber of 1 – 3 mm despite its very distal location [2]. This caliber is up to ten-fold larger than the normal caliber of such vessels [5]. The aberrant artery can protrude through a small mucosal defect, become susceptible to every minor mechanical trauma, and eventually erode into the lumen to cause severe acute GI hemorrhage.

Dieulafoy's lesion mostly found in advanced age groups (6th – 7th decade) [2]. It affects males twice more common than females. Affected individuals often have non gastrointestinal comorbidities such as cardiovascular disorders, hypertension, diabetes mellitus, renal insufficiency. Also affected patients are often administered NSAIDs / anticoagulants. Most likely these drugs promote bleeding from underlying lesion [5].

Patients are typically asymptomatic before presenting with acute, profuse GI bleeding, which manifest as hematemesis, melena or hematochezia. Approximately half of the cases present with both hematemesis and melena [7]. Most of the hemorrhage caused is intermittent and severe with hemodynamic instability in 80% of cases. Mortality has decreased due to effectiveness of treatment [8].

Diagnosis is challenging since the lesions are small and indiscriminate dimensions with intermittent bleeding. Besides, its rarity can lead it to be confused with other lesions such as arteriovenous malformations and aneurysms [9].

GI endoscopy is the first-line diagnostic procedure since it allows for diagnosis and a possible therapeutic approach [9], during active bleeding. Endoscopy is effective in diagnosing about 70% of cases. The endoscopic visual diagnostic criteria that are necessary for the diagnosis of dieulafoy's lesion are:

1. Normal mucosa around the small defective mucosal lesion which has

active pulsatile bleeding smaller than 3mm,

2. Visualization of a protruding vessel from a slight defect in normal mucosa.
3. Observation of a fresh clot attached to a defect in normal mucosa.

When endoscopy fails to find the bleeding source, angiography and capsule endoscopy can be used to confirm the diagnosis.

On angiography, there is an extravasation of contrast into the GI tract from an eroded artery. The presence of the tortuous vessel in the arterial phase with no early venous return also indicates dieulafoy's lesion.

The first line modality of treatment in dieulafoy's lesion is endoscopy. The three commonly performed endoscopic treatment procedures include:

1. Thermal heat probe/argon plasma coagulation.
2. Regional injection of epinephrine/norepinephrine and sclerotherapy.
3. Mechanical banding and hemoclips [10].

If endoscopic treatment fails, surgical treatment is performed, including resection. In the present case, exploratory laparotomy followed by resection and anastomosis was done.

Conclusion

Dieulafoy's lesion in the jejunum is a very rare condition that can lead to significant hemorrhage and death. Its rarity makes diagnosis challenging, particularly when the lesion is seen in less common places. The first line of diagnostic and therapeutic options is endoscopic therapy. The clinician should be aware of this lesion as a potential contributor to gastrointestinal bleeding in order to distinguish it from other etiologies and implement targeted and expedient therapeutic therapy.

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