

Dieulafoy's Lesion-Related Gastrointestinal Bleeding: Clinical Presentation, Endoscopic Findings and Therapeutic Approaches

Rhean Dos*

Department of Gastroenterology, Mayenei Hayeshua Medical Center, Jerusalem, Israel

Introduction

Dieulafoy's lesion is a rare but potentially life-threatening cause of gastrointestinal bleeding. It typically presents with sudden, severe bleeding in the gastrointestinal tract, most commonly in the stomach, although it can occur in other parts of the gastrointestinal system as well. The bleeding often leads to symptoms such as hematemesis (vomiting blood) or melena (black, tarry stools). Endoscopic findings in patients with Dieulafoy's lesion typically reveal a small, abnormally enlarged artery that protrudes through the sub mucosal layer of the gastrointestinal lining. This vascular abnormality is prone to rupture, causing the severe bleeding characteristic of this condition. Treatment for Dieulafoy's lesion involves endoscopic intervention, where a variety of techniques can be used to stop the bleeding. These may include injection therapy to sclerose or coagulate the bleeding vessel, mechanical haemostasis with clips or bands, or sometimes, in severe cases, cauterization or thermo coagulation. In rare instances where endoscopic treatment fails or the lesion is in an inaccessible location, surgical intervention may be necessary. Prompt diagnosis and intervention are crucial to manage Dieulafoy's lesion-related gastrointestinal bleeding and prevent life-threatening complications [1].

Description

Dieulafoy's lesion is indeed a rare but significant cause of massive obscure gastrointestinal hemorrhage, which refers to bleeding that is not easily identified through standard diagnostic tests. It occurs when an otherwise histologically normal artery remains abnormally large and fails to taper within the gastrointestinal wall. This artery runs in a tortuous manner within the sub mucosal layer and protrudes through an area of apparently normal mucosa as a small defect. This condition typically presents in older individuals and is thought to be an acquired phenomenon. It was first described separately, initially referred to it as miliary aneurysm of the stomach, believed it to be an early form of peptic ulceration, which he called exulceratio simplex. Notably, delayed bleeding from a gastric Dieulafoy's lesion has been observed following Roux-en-Y gastric bypass surgery for morbid obesity. In this context, the differential diagnosis includes considering other possible causes of bleeding, such as early anastomotic marginal ulceration, staple line hemorrhage, and even late erosive hemorrhage originating from outside the stomach. The management of Dieulafoy's lesion-related bleeding, particularly in the context of Roux-en-Y gastric bypass, can be challenging and requires careful evaluation and intervention.

This case describes a 54-year-old female with a high Body Mass Index (BMI) who underwent a single anastomosis gastric bypass surgery. During the operation, bleeding was noticed from the gastric pouch. The surgeons undertook measures to control the bleeding, including under-running the entire staple line and creating a gastro-jejuna anastomosis. Initially, the patient appeared stable, but she later experienced significant bleeding with bloody emesis shortly after extubation. An Esophago-Gastroduodenoscopy (EGD) was performed, revealing

intra-gastric blood and clots, making it difficult to identify the exact source of the bleeding. The patient was then re-prepped and draped, and a laparoscopy was conducted. The laparoscopic examination revealed an extremely dilated gastric remnant, which was initially drained via needle aspiration. Through a combined laparoscopic-endoscopic approach and clamping of both the afferent and efferent loops of the gastric pouch, an arterial bleeding point was identified in the posterior wall of the lesser curvature near the esophagogastric junction. Several laparoscopic sutures and endoscopic clips with coagulation were used to control the bleeding site. This case highlights the complexity of managing intraoperative bleeding complications during gastric bypass surgery, especially in patients with a high BMI. A multidisciplinary approach involving laparoscopy and endoscopy was necessary to successfully identify and control the source of hemorrhage in this patient.

The approach to managing massive upper Gastro Intestinal (GI) hemorrhage immediately after gastric bypass surgery differs from handling delayed potentially life-threatening GI bleeding that occurs following such operations. In delayed bleeding cases, marginal ulceration is more common than bleeding from the remnant gastric pouch. Determining the source of bleeding from an excluded stomach is complex and may require advanced techniques like double-balloon enteroscopy and capsule endoscopy. Notably, bleeding from a Dieulafoy's lesion following gastric bypass surgery may represent a distinct condition compared to other Dieulafoy's cases. It could be triggered by a sudden increase in intravascular pressure after the division of the stomach during the surgery. In sporadic cases of Dieulafoy's lesion, the stomach is the most common site for these abnormalities, with the majority occurring along the lesser curvature. About ninety percent of all gastric lesions are found within 6 cm of the gastro-esophageal junction. However, one-third of Dieulafoy's lesions are extragastric and can be located in the esophagus or small intestine. This emphasizes the importance of considering various potential locations when diagnosing and managing Dieulafoy's lesions in different clinical contexts, including those occurring after gastric bypass surgery [2-5].

Conclusion

This case represents a unique occurrence of an intraoperative Dieulafoy's lesion causing massive gastrointestinal bleeding during single anastomosis gastric bypass surgery. The necessity of excising the gastric pouch to manage this lesion highlights its distinct nature compared to sporadic Dieulafoy's cases. Given the unusual presentation and severity of bleeding, it underscores the importance of considering the possibility of such lesions in every case of intraoperative bleeding during gastric bypass surgery. This case serves as a valuable reminder for surgeons to be vigilant and prepared for unexpected complications during the procedure, including rare occurrences like Dieulafoy's lesions.

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*Address for Correspondence: Rhean Dos, Department of Gastroenterology, Mayenei Hayeshua Medical Center, Jerusalem, Israel, E-mail: dos23@edu.in

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Received: 27 May, 2023, Manuscript No. CgJ-23-108035; Editor assigned: 29 May, 2023, Pre QC No. P-108035; Reviewed: 12 June, 2023, QC No. Q-108035; Revised: 17 June, 2023, Manuscript No. R-108035; Published: 26 June, 2023, DOI: 10.37421/2952-8518.2023.8.201.

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How to cite this article: Dos, R. "Dieulafoy's Lesion-Related Gastrointestinal Bleeding: Clinical Presentation, Endoscopic Findings and Therapeutic Approaches." *Clin Gastroenterol J* 8 (2023): 201.