UNVEILING DIEULAFOY'S LESION: A CASE REPORT ON UPPER GASTROINTESTINAL BLEEDING CAUSED BY DIEULAFOY'S LESION

Case report

ABSTRACT

Dieulafoy's lesion is a rare entity, mostly found in stomach (53%), followed by the duodenum or jejunum (33%) and lastly colon or rectum (13%). Although relatively infrequent, Dieulafoy's lesion indicates an important etiology of acute gastrointestinal bleeding because of its predisposition to cause massive, life-threatening and recurrent bleeding. We report a female patient with clinical presentation of hematemesis and melena for 2 day's duration.

KEY WORDS: Dieulafoy's lesion, endoscopy band ligation, hemostasis.

INTRODUCTION

Dieulafoy's lesion is a developmental vascular malformation of gastrointestinal tract (GIT). Symptoms of dieulafoy's lesion include bleeding and are typically reported as melena, haematemesis, an association of both, haematochezia, or as iron deficiency anaemia.It's a rare cause of life threatening gastrointestinal bleeding that account for about 1% to 2% of all causes of gastrointestinal bleeding and 6.5% of all causes of upper gastrointestinal non-variceal bleeding.[1]

The main reasons for development of Dieulafoy's lesions are pulsations of an abnormally large artery may spoil mucosal surface leading to exposure of artery to bowel contents resulting in erosion and bleeding, wear and tear of gastric mucosa may results in arterial thrombus formation leading to necrosis and bleeding and age related gastric mucosal atrophy.[2]

Dieulafoy's lesions are mainly diagnosed through endoscopic evaluation, usually during upper endoscopy, but sometimes, it can be challenging to diagnose a Dieulafoy's lesion using endoscopy. The procedure has about a 70% success rate in identifying the lesion. However, there are cases where the lesion is too small to be seen, and the surrounding mucosa appears normal. Excessive blood in the stomach can also make it difficult to locate the bleeding site. As a result, multiple endoscopies may be needed before a diagnosis can be made. Biopsies of

the affected vessel usually avoid due to the risk of bleeding. However, previous studies have shown that the affected artery looks normal on histology, with occasional amyloid deposits. DLs typically don't show ulceration or deep penetration into the muscularispropria. One important distinguishing factor between DLs and gastric ulcers is the absence of sub-intimal fibrosis and mucosal inflammation [12-14]. Treatment options include endoscopic injection, cautery, ligation, embolization, hemoclipping and surgery.

CASE REPORT

A 65 years old female patient was admitted in gastroenterology department with complaints of hematemesis and melena for 2 days. Patient had a past medical history of Type 2 Diabetes Mellitus for 6 years, dyslipidemia for 5 years and hypertension for 5 years; the past medications include T. METFORMIN 1gm HS, T. GLIBENCLAMIDE 10mg once daily, T. ATORVASTATIN 10mg HS and T. AMLODIPINE + ATENOLOL 5mg + 50mg HS.

Laboratory investigation revealed anaemia (Hb – 6.0 gm/dL) and leucocytosis (total count – 18690 cells/cumm). LFT report shows a decrease in total protein (5.2 gm/dL) and RFT report shows an increase in urea (70 mg/dL). FBS (180 mg/dL), HbA1C (6.4 %), CRP (19.7 mg/dL) and ESR (82 mm/hr) was also elevated. USG abdomen and pelvis provides a suboptimal evaluation due to body habitus and bowel gas shadowing, so it suggests an additional imaging which gives an impression of grade 1 – 2 fatty liver. Upper GI endoscopy report shows an impression of gastric erosion and dieulafoy lesion gastric body. Hence the patient was diagnosed as Upper GI bleed caused by dieulafoy's lesion.

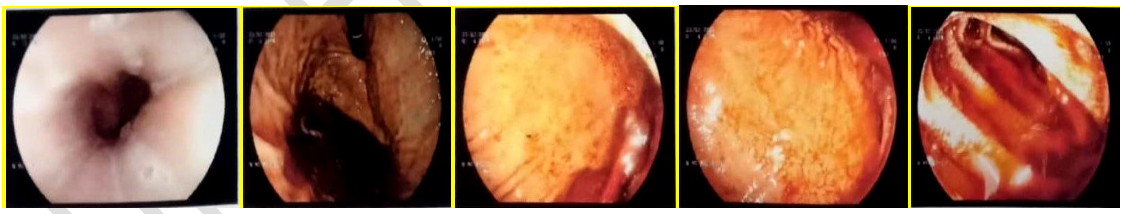

Figure: 1 Endoscopic band ligation

Patient was firstly managed with Endoscopic band ligation. Upper GI endoscopy performed after 24 hours shows slipped off band, so 4 hemoclips were applied and hemostasis achieved.

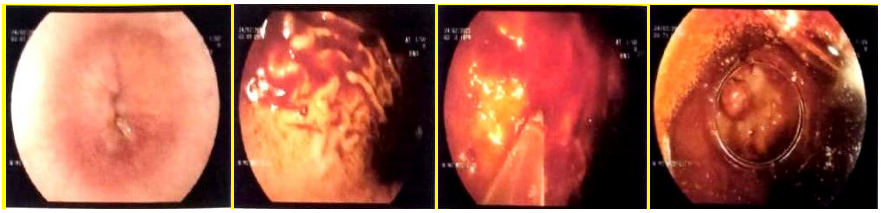

Figure: 2 Upper GI bleed caused by dieulafoy's lesion

Figure: 3 After 6 days of treatment

Other than this, the patient was managed with IV antibiotics (INJ. PIPERACILLIN TAZOBACTUM 1 gm BD), PRBC transfusion and other supportive medications such as INJ. TRANEXAMIC ACID 500 mg TDS, INJ. VITAMIN K 1 mg BD, INJ. PANTOPRAZOLE 40 mg BD and C. VISBIOME (PROBIOTICS) OD.

After 6 days of treatment, the patient symptoms were improved and discharged with the advice of T. CIPROFLOXACIN 500 mg BD for 5 days, T. PANTOPRAZOLE 40 mg BD for 7 days, SYP SUCRALFATE 15 ml TID for 7 days, C. VISBION (PROBIOTICS) HS for 7 days, INJ HUMAN MIXTARD (BIPHASIC ISOPHANE INSULIN) 12 IU-12 IU-10 IU and continue own medicines.

DISCUSSION

Dieulafoy's lesion is a life-threatening condition, defined by a large tortuous artery most often in the submucosal wall that erodes and bleed. It is also called as Exulceratio simplex dieuafoy.[3] It is a developmental malfiormation instead of degenerative changes. Endoscopy remains the foremost diagnostic tool for dieulafoy's lesion.[4] Endoscopic intervention is successful in achieving hemostasis in 70% to 98% of cases. There are different treatment options available, including injection therapy with epinephrine, mechanical therapy with hemoclips or banding and thermal therapy using Argon plasma coagulation or electrocoagulation. Mechanical hemostasis is considered the safest and most effective approach. While injection therapy alone may be less effective initially, it can be combined with mechanical or ablative therapy in cases of massive bleeding for successful hemostasis. Endoscopic hemoclipping is more effective than injection therapy alone, especially in the

proximal stomach, with lower rebleeding rates. If endoscopic hemoclipping fails, endoscopic band ligation is another effective option.[5]

This case report underscores the significance of prompt recognition and intervention in managing this rare but potentially life threatening condition characterised by recurrent gastrointestinal bleeding. Drawing from various literature sources, it's evident that vial endoscopic therapy remains the cornerstone of treatment, advancements in imaging techniques like capsule endoscopy and angiography have enhanced diagnostic accuracy and therapeutic outcome. Additionally, the utilization of minimally invasive approaches such as endoscopic band ligation and angiographic embolization has shown promising results in achieving haemostasis and reducing the need for surgical intervention. Nonetheless, further research is warranted to delineate optimal treatment algorithms tailored to individual patient characteristics and lesion presentation, ultimately improving clinical outcomes and reducing morbidity associated with this challenging conditions.

Our patient undergone endoscopic band ligation, after 24 hours slipped off band and 4 hemoclips were applied and hemostasis achieved.

CONCLUSION

Dieulafoy's lesion is a really rare and dangerous condition where a blood vessel in the gastrointestinal tract becomes enlarged and can cause severe bleeding if it bursts. Direct endoscopic visualization is considered the gold standard for diagnosing dieualfoy's lesions. It provides the most accurate and reliable method to identify these lesions. Usually, patients get diagnosed after just one endoscopy, but sometimes, if there are food particles or blood that makes it hard to see, they might need to do multiple endoscopies. Nowadays, physicians often use therapeutic endoscopy as the top treatment option for patients with active bleeding. It has greatly increased the chances of survival for these patients.

Ethical Approval:

As per international standards or university standards written ethical approval has been collected and preserved by the author(s).

Consent

As per international standards or university standards, patient(s) written consent has been collected and preserved by the author(s).

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