

## CASE REPORT

# A Young Man with Dieulafoy,s Lesion in Proximal Stomach - A Uncommon Case Report

M. Rahman Mia<sup>1</sup>, M. Anamul Hoque<sup>2</sup>, N. Islam<sup>3</sup>

### Abstract :

*Dieulafoy's lesions are a rare but challenging cause of upper GI bleeding due to their intermittent nature. This lesions contribute approximately 6% of non-variceal upper GI bleeds and 1-2% of all GI bleeding. This quiescent lesions are easily overlooked on endoscopy and the bleeding lesions are occationally misidentified. Increased awareness and advances in the endoscopic techniques are important for accurate diagnosis.*

*A case of 32 years young man present with Dieulafoy,s lesion in proximal stomach has been described here.*

**Keywords:** Dieulafoy,s, stomach, meleana, gastrectomy

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### Introduction:

Dieulafoy lesion (DL) in the gastrointestinal (GI) tract is a rare but important cause of GI bleeding; massive bleeding from this lesion can be fatal unless adequate treatment is promptly initiated.<sup>1</sup> In approximately 4-9% massive upper gastrointestinal haemorrhage, no demonstrable cause can be found.<sup>2</sup> Dieulafoy's lesion is thought to be the cause of acute and chronic upper gastrointestinal bleeding in approximately 1-2% of these cases.<sup>3</sup> The incidence, however, might vary from 0.5% to 14%. It is thought to be more common in males (M:F = 2:1) with a median age of 54 years at presentation. There is usually no significant NSAIDs or alcohol abuse.<sup>4</sup> Although the exact cause is not known, pathogenesis of this condition is considered to be the presence of abnormal large-caliber arteries at the submucosal level, subsequently causing the thinning of the overlying

mucosa, producing erosions and leading to exposure of the vessel wall to the lumen, finally with the possibility of developing digestive hemorrhage.<sup>5</sup>

We describe a uncommon case report, a 32 years young man had dieulafoy lesion in fundus & proximal body of stomach presented with meleana underwent sub-total gastrectomy by left thoraco-abdominal incision.

### Case Report:

Mr. Rathindranath 32 years young man garment,s worker came from Shripur, Magura presented with passage of black colour stool, abdominal fullness and severe weakness. His presenting symptoms started from about 12 years back. Initially he had H/O occationally passage of black stool and red coloured stool alternately as interval of 2-3 months and persist for 3-4 days. Gradually that was increased

1. Associate Professor, Department of Thoracic Surgery, NIDCH, Mohakhali , Dhaka.
2. Registrar, Department of Thoracic Surgery, NIDCH, Mohakhali , Dhaka.
3. Assistant Professor, Department of Thoracic Surgery, NIDCH, Mohakhali , Dhaka.

**Correspondence to:** Dr. Md. Mofizur Rahman Mia, MS (Thoracic Surgery), Associate Professor, Department of Thoracic Surgery, NIDCH, Mohakhali , Dhaka. E-mail: mofizts@gmail.com, Mobile: 01711-301783

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and passed black stool frequently. He also noticed occasional central abdominal pain which was colicky in nature, persist few hours, no radiation and relieved after defaecation. He also felt abdominal fullness and nausea but no vomiting. Gradually he developed very weakness and unable to performed daily activities. For that, around on 2009 he treated in Kolkata, India 2 times and investigated, took medication and h/o blood transfusion 2 bags. But his problem not improved and again he treated in Chennai, India on 2016 and lastly on 2020 and diagnosed as dieulafoy's lesion in stomach. His bladder habit was normal. No h/o cough, haemoptysis, chest pain, haematemesis, jaundice, bone pain or headache. For definitive treatment, he was admitted in our unit in NIDCH on 05/01/21 (reg.- 95/22).

He had no co-morbidities. He had no past medical or surgical history but h/o taking blood transfusion several times. No significant family history. No allergy to any specific food or medicine. He was non-smoker and non-alcoholic. He was married and father of one son. He came from low class family and was immunized according EPI schedule. On physical examination, we found patient looked weak and anxious. Found severely anaemic but not ecteric and mildly dehydrated. All other vitals were normal limit, had no any peripheral lymphadenopathy including neck gland. Abdomen, Chest and other systemic examination revealed normal findings.



**Fig.-2:** TC leveled RBC scanning

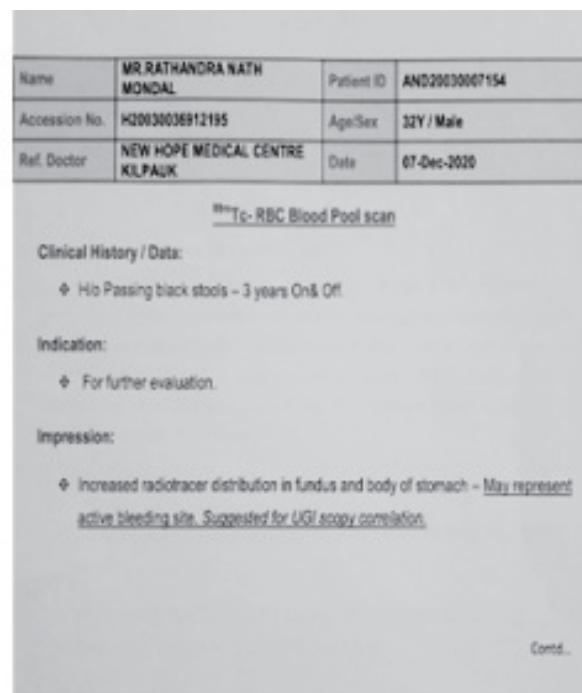
CXR-P/A view and CT abdomen found normal findings. Upper GI endoscopy found Dieulafoy's lesion in fundus of stomach.

TC 99m leveled RBC scanning revealed active bleeding site found in fundus and proximal body of stomach.



**Fig.-1:** Upper GI endoscopy

All other routine investigations found within normal limit but only Hb% was very low level (4.1 g/dl).



So we planned for sub-total or total gastrectomy through Left thoraco-abdominal incision Under G/A with one lung ventilation. Patient underwent thorough pre anesthetic check up and pre-operative optimization was done, then surgery was performed. During procedure, diaphragm was cut along the incision line and there was no collection within abdominal & thoracic cavity, liver and other organ found normal. Proximal stomach found congested and huge omental fat & adhesions were visualized. Stomach was mobilised by ligasure and bipolar diathermy from distal esophagus to first part of duodenum and preserved blood circulation specially in distal stomach. Then excised from gastro-esophageal junction to distal part of body of stomach preserved only pylorus and anastomosis done between distal esophagus & pyloric part of stomach used linear and circular staplers. Total specimen, part of distal esophagus and distal stomach sent for histopathology separately. Then checked any injury/ leak of anastomosis and a NG tube kept distal to anastomosis. Then diaphragm closed by two layers. Also saw lung expansion properly.

		National Institute of Disease of The Chest & Hospital (NIDCH)	
		Department of Pathology & Microbiology	
		Mehakali, Dhaka-1212.	
<b>HAEMATOLOGY REPORT</b>			
ID No.	: 998	Test Date:	13 - Jun - 20
Patient's Name :	ROBINDRONATH	Age:	32
Ref'd By		Sex:	Male
Specimen	: Blood	Ward:	
Ref No:			
(Estimations were carried out by Automated Partica DX Nexus/Hemba Medical) Hematology Analyzer & Verified manually			
TEST	RESULT	REFERENCE VALUE (ADULT)*	
Hemoglobin (Hb)	41 g/dl	M: 13-18, F: 12-16 g/dl	
RBC (Wesitegram)	125 mm <sup>3</sup> /1st hr	M: 6-10, F: 0.15 mm <sup>3</sup> /1st hr	
TOTAL WBC COUNT	4,380 /mm <sup>3</sup>	4,000 - 11,000/mm <sup>3</sup>	
DIFFERENTIAL COUNT			
Neutrophils	71.18 %	60-75 %	
Lymphocytes	22.00 %	20-50 %	
Monocytes	1.00 %	0.2-10 %	
Eosinophils	5.50 %	0.1-6 %	
Basophils	0 %	0.0-1 %	
Total Cit. Eosinophil	281 /mm <sup>3</sup>	50-400/mm <sup>3</sup>	
Platelet Count	309,000 /mm <sup>3</sup>	150,000 - 450,000/mm <sup>3</sup>	
MPV	8.7 fl	7.0-11.0 fl	
PDW	18.0 %	10-18 %	
PCV	0.32 %	0.1-0.2 %	
RBC COUNT	2,19 m/l	M: 4.5-5.5, F: 3.8-5.5 m/l	
HCT/PCV	18.0 %	M: 40-50%, F: 36-48%	
MCV	72.0 fl	76-96 fl	
MCH	19.0 pg	27-32 pg	
MCHC	28.0 g/dl	32-36 g/dl	
RDW/ CV	28.0 %	11.6-14 %	
Blood Film:			

Fig.-3: Hematological report

After required haemostasis, a chest drain kept in situ and wound closed in layers. Dieulafoy's lesion was confirmed histopathologically in our case and proximal & distal margin free of lesion.

Post operative recovery was uneventful. On 7th POD contrast X-ray of oesophagus & stomach done which revealed no leak. Also gave orally Xension violet mixed water to check any leak. On 8th POD NG tube removed and gave liquid diet. On 9th POD chest drain removed. All skin clips were removed on 12th POD and then discharged with advice.

<b>Microscopic description/comment:</b>
Specimen A, (Part of stomach):
Sections show wall of stomach.
It reveals focal ulceration, lined by granulation tissue.
There are multiple dilated and congested blood vessels within the submucosa.
Other areas of the mucosa are unremarkable.
<b>Resection margins:</b>
Proximal resection margin: Free of lesion.
Distal resection margin: Free of lesion.
Gastroesophageal junction: Free of lesion.
Greater omentum and lesser omentum: Unremarkable.
Lymph nodes (Four in number): All the lymph nodes show features of reactive hyperplasia.
<b>Specimen B, (Distal part of stomach):</b>
Sections show distal part of stomach, it is free of lesion.
<b>Specimen C, (Distal part of esophagus):</b>
Sections show distal (dough-nut) of esophagus, it is free of lesion.
<b>Diagnosis:</b>
Specimen A, Part of stomach, subtotal gastrectomy:
Consistent with Dieulafoy's lesion,
Please see microscopic description.
Specimen B, Distal part of stomach:
Free of lesion.
Specimen C, Distal part of esophagus:
Free of lesion.

Fig.-4: Microscopic description of specimen.



Fig.-5: after mobilization stomach



**Fig.-6:** after excision of stomach



**Fig.-7:** Excised specimen



**Fig.-8:** specimen (mucosa)



**Fig.-9:** post.operative wound

#### **Discussion:**

Dlafoy's lesion is one of the rare causes of GI bleeding. It accounts for about 1.5% of all GI hemorrhages.<sup>6</sup>

It is caused by an abnormally large calibre persistent tortuous submucosal artery. This has been demonstrated by histological examination of resected specimens. The artery protrudes through

a solitary, tiny mucosal defect (2-5 mm), commonly in the upper part of the stomach. It may rupture spontaneously and lead to massive bleeding. It has been suggested that the thin mucosa overlying a pulsating artery is eroded progressively by the mechanical pressure from the abnormal vessel.<sup>7</sup> This lesion was first described by Gallard and later named for the French surgeon Georges Dieulafoy who called it "exulceratio simplex" believing that it was the first stage of a gastric ulcer, the progression of which being stopped by the occurrence of hemorrhage.

The majority of DL occur in the proximal stomach, typically located within 6 cm of the gastroesophageal junction on the lesser curvature, due to arterial vessels directly branching from the left gastric artery<sup>8</sup> but they have also been reported in the esophagus, small and large bowel and also other rare locations such as the rectum or the gallbladder and even in extra-GIT like bronchus.<sup>9</sup>

The cause is unknown. In contrast to peptic ulcer disease, a history of alcohol abuse or NSAID use is usually absent in Dieulafoy's lesion. The most common presenting symptom is recurrent, often massive, haematemesis associated with melaena (51%). The lesion may present with haematemesis alone (28%), or melaena alone (18%). Our patient presented with mainly melaena. Characteristically, there are no symptoms of dyspepsia, anorexia or abdominal pain. Initial examination may reveal haemodynamic instability, postural hypotension and anaemia. A Dieulafoy's lesion is difficult to diagnose, because of the intermittent pattern of bleeding. Endoscopy reveals a reddish-brown protruding spot with small erosion and no ulcer. DL is more easily identified when pulsating or oozing blood. Elective endosonography to examine spots suspected to be DLs is helpful in confirming the diagnosis.<sup>10</sup> In difficult cases, angiography & TC 99m leveled RBC scanning may be useful when endoscopy fails to identify the lesion.

Traditionally, the treatment of DL was surgical. However, with the development of endoscopic haemostasis techniques, the need for surgery has been reduced, and the mortality rates have decreased from 80% to 8.6%. Therefore, the current treatment of choice in accessible lesions is

endoscopy, with a success rate of > 90% and low rates of recurrence and complications. The endoscopic haemostasis procedures are classified into three groups: (1) thermal: electrocoagulation, heater probe and argon plasma coagulation (2) local injection of substances, such as adrenaline or sclerosing solutions; and (3) mechanical: haemostatic clips and bands. However, in the clinical field, the choice of a procedure depends on the experience, decision of the endoscopist and the field of vision.<sup>11</sup> Surgical procedures currently employed include under-running of the lesion or a wedge resection of the affected section of gut. Angiography may also be used therapeutically by gelfoam embolisation. This type of treatment is usually reserved for patients who are not amenable to endoscopic therapy and are poor surgical candidates.

Our patient had Dieulafoy's lesion in fundus & proximal part of body of stomach and done subtotal gastrectomy by left thoraco-abdominal incision successfully with symptomatic improvement of the patient.

### **Conclusion:**

Although uncommon, Dieulafoy's lesions should always be considered as a differential in any patient with massive painless GI bleeding. Due to its intermittent nature, initial evaluation may not identify the lesions thus requiring repeat exams and they are associated with a high rate of rebleeding. Though surgical excision decrease the chance of re-bleeding, various endoscopic methods are the modality of choice for the identification and treatment of gastric Dieulafoy's lesions now a day. A hope of this case report is to encourage providers to remember this potential cause and to facilitate its management when dealing with such dilemmas of chronic anemia, gastrointestinal bleeding, and ongoing hematemesis, meleana.

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