
CASE REPORT**Massive gastric hematoma, a rare finding in a dissecting cadaver: A case report**

M.V. Ravishankar^{1}, Vidya C.S.¹, Prasanna K. Santhekadur²*

¹Department of Anatomy, ²Department of Biochemistry, JSS Medical College, JSS AHER, Mysuru-570015 (Karnataka) India

Abstract

Intramural formation of massive hematoma is an uncommon clinical presentation. It commonly involves bleeding in the cavity of the upper gastrointestinal tract like the oesophagus, stomach, and various parts of small and large intestines. Most of the reports in the earlier literature were found to be associated with the clinical case scenarios, but the cadaver-based intramural hematoma in the stomach is one such rare finding met during routine dissections. Various clinical case backgrounds involving the complication of mere bleeding to haemorrhage in the gastrointestinal tract will be highlighted under the case report.

Keywords: Gastrointestinal tract, Hematoma, Haemorrhage, Intramural

Introduction

Hematoma is formed due to various pathophysiological reasons seen in diversified anatomical locations of the body like, subcutaneous, intramuscular, subdural, intramural, submucosal, joints, etc. Hematoma may be traumatic, or iatrogenic because various therapeutic and diagnostic endoscopic procedures involve the risk of inducing bleeding [1]. It involves the excess bleeding into the lumen followed by clot formation. The hematoma includes the red blood cells, haemoglobin, oxidized haemoglobin; due to the breakdown of blood cells free haemoglobin is a part of it [2]. Prolonged use of anti-aggregating and anti-coagulant therapy may tend to increase the undue complication of bleeding from the gastrointestinal tract which occurs among 1 in 250,000 elderly

population [3]. One such cadaveric based finding with a massive blood clot in the stomach, along with its incidences will be highlighted.

Case Report

During routine dissection of the abdominal viscera of a male cadaver aged about 80 years, we observed a massive stomach swelling which was occupying the whole extent of the stomach. Later, opening the stomach we noticed a solid blackish brown mass occupying the lumen of the stomach almost completely. The mass was solid but slightly rubbery and brittle in consistency. All other features of the stomach were within usual anatomical limits (Figure 1).



Figure 1: Showing the stomach before, and after its opening

Discussion

The clinical incidences of intramural or sub-mucosal hematoma involve various anatomical entities like the oesophagus, duodenum, small intestine, colon [4], etc. Peptic ulcers, coagulopathy, vascular aneurysms, trauma, or iatrogenic factors could be the possible associated causes for such manifestations. Many clinical cases of gastric hematoma were reported earlier with peptic ulcers, portal hypertension with liver cirrhosis, and patients with a history of bleeding disorders like haemophilia. In a condition like haemophilia, therapeutic attempts with medications inducing blood coagulation directly or using coagulation factors to stop the complications of undue bleeding tendency in the patients may result in clot formation [5].

Extensive use of anticoagulant drug therapy by Warfarin may likely induce bleeding in the gastro-

intestinal pathways, urinary tracts, intracranial, soft tissues, subcutaneous tissues, etc. The probability of such therapies having been adopted as a part of preventive or therapeutic measures cannot be ruled out in the present donated cadaver with a history of natural death [6]. Drug like Meropenem induced thrombocytopenia is one of the complications associated with bleeding in various organs like gastrointestinal tract. Hence the history of past and present illness along with the ongoing medications are notable findings in giving the advice for prevention of relapse [7]. Coagulopathy stands as an important condition where the biological clot precipitating natural factors may fail to stop bleeding through coagulation mechanism. Initiation of anticoagulant therapy in cardiac valve replacement for a long duration has resulted in the formation of a large hematoma in the ileal lumen which was

observed in a computed tomography scan. The use of anticoagulant therapy is one of the prominent non-traumatic causes inducing intramural bleeding and formation of hematoma. Often a large haemorrhagic coagulate may get consolidated within lumen of intestine leading to intestinal obstruction [8].

Based on the diversity of etiological factors, the possible mechanism of intramural haemorrhage may involve the sequence of pan-gastric mucosal degradation followed by ulcer formation, and disruption of submucosal vascular integrity followed by wall weakening which could induce the gastric intramural haemorrhage, later followed by colt formation resulting in hematoma [4]. Haematoma may be formed within the submucosal wall due to submucosal bleeding. The condition may be attributed to an increase in back pressure in the oesophageal venous due to severe portal hypertension associated with the strenuous act of vomiting [9]. Patients with anticoagulant therapy are more likely to experience such consequences. In rare clinical incidence, the unusual intramural hematoma was noticed in the gastrointestinal tract in conditions like leukaemia [10].

Portocaval communication is a sensible but relatively mute communication that exists at various anatomical sites like near the lower end of oesophagus, terminal part of anal canal, around the umbilicus, etc. Portocaval anastomosis acts as a venous shunt between the systemic and portal venous circulatory systems. It plays an important role in damping down undue intravenous pressure

through its collateral communicating channels during severe portal hypertension with liver cirrhosis. Oesophagus is a site of portocaval anastomosis and plays a role in severe portal hypertension by establishing retrograde communication. It is one of the most susceptible sites of severe bleeding often resulting in death of the patient. End-stage consequences of portal hypertension might have caused massive internal bleeding, thereby playing a role in the formation of gastric hematoma in the existing report. By seeing various clinical findings, many cases were associated with the drug / therapy induced bleeding in various internal organs. In the present cadaveric findings, the probability of rigorous treatment adopted at various point of time in the history of past and present illness of the diseased and its related data remains obscure (Table 1).

Conclusion

Haemorrhagic complications are often met with the prolonged use of antiplatelet aggregating agents or anticoagulant drugs used in gastroenterological and visceral surgical procedures. The traumatic, therapeutic, and diagnostic factors are also involved in the risk of bleeding at various time points. Such complications are life-threatening, which necessitate immediate hospitalization and timely therapeutic interventions and medical management. The present cadaveric finding is a lid opener to sensitize the pre-clinical students about, various bleeding and clotting disorders.

Conflict of Interest

Nil

Table 1: Clinical case findings of authors

Authors and Year	Clinical Case Findings
Iwado <i>et al.</i> 2023 [9]	Gastroesophageal submucosal hematoma
Alabd <i>et al.</i> 2022 [10]	Gastric intramural hematoma
Dawaiwala <i>et al.</i> 2021 [7]	Gum bleeding and thrombocytopenic purpura over the bilateral elbows and left forearm
Forutan <i>et al.</i> 2018 [8]	Ileal intramural hematoma
Fernandes <i>et al.</i> 2016	Intramural hematoma of the colon
Ng <i>et al.</i> 2016	Gastric intramural haematoma
Pinheiro <i>et al.</i> 2016	Subcutaneous tissue haematoma
Leong <i>et al.</i> 2014	Intestinal haemorrhage
Dhawan <i>et al.</i> 2008	Gastric intramural hematoma

References

- Aulinger BA, Saner FH, Stark K, Mayerle J, Lange CM. Platelet aggregation inhibitors and anticoagulants in gastroenterological and visceral surgical procedures. *Dtsch Arztebl Int* 2022; 119(49):851-860.
- Pan P, Xu L, Zhang H, Liu Y, Lu X, Chen G, Tang H, Wu J. A review of hematoma components clearance mechanism after subarachnoid hemorrhage. *Front Neurosci* 2020; 14:685.
- Fernandes SR, Aonçalves AR, Araújo L. Spontaneous intramural hematoma of the colon. *Rev Esp Enferm Dig* 2016; 108(8): 501-502.
- Ng SN, Tan HJ, Keh CH. A belly of blood: A case report describing surgical intervention in a gastric intramural haematoma precipitated by therapeutic endoscopy in an anticoagulated patient. *Int J Surg Case Rep* 2016; 26:65-68.
- Dhawan V, Mohamed, A, Fedorak, RN. Gastric intramural hematoma: A case report and literature review. *Canadian J Gastroenterol* 2008; 23(1): 19-22.
- Pinheiro NC, Lopes A, Camões A, Monteiro MS. Spontaneous subcutaneous tissue haematoma associated with warfarin. *BMJ Case Rep* 2016; 2016: 10.1136/bcr-2016-215134.
- Dawaiwala I, Pawar S. Meropenem-induced severe thrombocytopenia in an adult patient: A case report. *J Krishna Inst Med Sci Univ* 2021; 10(2):156-16
- AlizadehForutan M, Mojarad FA, Rahmani N. Case Report: Large ileal intramural hematoma presenting as an intestinal obstruction in a patient on Warfarin with incidental breast cancer. *F1000 Res* 2018; 7:724.
- Iwado T, Honda H, Gotoda T. A case of idiopathic gastroesophageal submucosal hematoma in a patient with no predisposition to bleeding. *DEN Open* 2023; 4(1):e284.
- Alabd A, Deitch C. A rare case of gastric intramural hematoma in recurrent leukemia. *Cureus* 2022; 14(1): e21385.

*Author for Correspondence:

Dr. M. V. Ravishankar, Department of Anatomy, JSS Medical College, JSS AHER, Mysuru-570015 India
Email: ravishmvrs40@gmail.com Cell: 9480186429

How to cite this article:

Ravishankar MV, Vidya CS, Santhekadur PK. Massive gastric hematoma, a rare finding in a dissecting cadaver: a case report. *J Krishna Inst Med Sci Univ* 2023; 12(4):156-159

Submitted: 22-July-2023 Accepted: 24-Aug-2023 Published: 01-Oct-2023