A rare cause of upper gastrointestinal bleeding: Posttraumatic pseudoaneurysm

Negi RC, Brij Sharma, Bhupender, Gaurav Kapoor, Bal Beer Verma, Ashok Sharma

ABSTRACT

Introduction: Hemobilia is a rare cause of upper gastrointestinal bleeding. It needs prompt diagnosis and immediate management to save the life. Posttraumatic pseudoaneurysm of hepatic artery is seen mostly after abdominal trauma causing liver injury or interventions on hepatobiliary system. On esophagogastroduodenoscopy active bleeding without apparent source is clue to the diagnosis.

Case Report: A 27-year-old male presented with history of one episode of hematemesis and melena. There was history of roadside accident one and a half months before and he had liver injury which was revealed on computed tomography of the abdomen. Patient was managed conservatively and discharged. On examination, patient was anemic and had postural fall in blood pressure. Emergency esophagogastroduodenoscopy revealed blood coming from ampulla. Computed tomography angiography (CTA) revealed pseudoaneurysm in segmental branches of right hepatic artery with active bleeding.

Conclusion: Hemobilia is defined as bleeding into the biliary tree from abnormal communication between blood vessel and bile duct. The most common cause of posttraumatic hemobilia is pseudoaneurysm. The classic triad of hemobilia is absent in 70% of cases and in such cases clinical diagnosis is difficult. The CTA is the investigation of choice and embolization is the treatment option. Surgery should be done in cases refractory to embolization.

International Journal of Case Reports and Images (IJCRI)

International Journal of Case Reports and Images (IJCRI) is an international, peer reviewed, monthly, open access, online journal, publishing high-quality, articles in all areas of basic medical sciences and clinical specialties.

Aim of IJCRI is to encourage the publication of new information by providing a platform for reporting of unique, unusual and rare cases which enhance understanding of disease process, its diagnosis, management and clinico-pathologic correlations.

IJCRI publishes Review Articles, Case Series, Case Reports, Case in Images, Clinical Images and Letters to Editor.

Website: www.ijcasereportsandimages.com

CASE REPORT

OPEN ACCESS

A rare cause of upper gastrointestinal bleeding: Posttraumatic pseudoaneurysm

Negi RC, Brij Sharma, Bhupender, Gaurav Kapoor, Bal Beer Verma,
Ashok Sharma

ABSTRACT

Introduction: Hemobilia is a rare cause of upper gastrointestinal bleeding. It needs prompt diagnosis and immediate management to save the life. Posttraumatic pseudoaneurysm of hepatic artery is seen mostly after abdominal trauma causing liver injury or interventions on hepatobiliary system. On esophagogastroduodenoscopy active bleeding without apparent source is clue to the diagnosis. **Case Report:** A 27-year-old male presented with history of one episode of hematemesis and melena. There was history of roadside accident one and a half months before and he had liver injury which was revealed on computed tomography of the abdomen. Patient was managed conservatively and discharged. On examination, patients was anemic and had postural fall in blood pressure. Emergency esophagogastroduodenoscopy revealed blood coming from ampulla. Computed tomography angiography (CTA) revealed pseudoaneurysm in segmental branches of right hepatic artery with active bleeding. **Conclusion:** Hemobilia is defined

as bleeding into the biliary tree from abnormal communication between blood vessel and bile duct. The most common cause of posttraumatic hemobilia is pseudoaneurysm. The classic triad of hemobilia is absent in 70% of cases and in such cases clinical diagnosis is difficult. The CTA is the investigation of choice and embolization is the treatment option. Surgery should be done in cases refractory to embolization.

Keywords: Hemobilia, pseudoaneurysm, embolization, Gastrointestinal bleeding.

How to cite this article

Negi RC, Sharma B, Bhupender, Kapoor G, Verma BB, Sharma A. A rare cause of upper gastrointestinal bleeding: Posttraumatic pseudoaneurysm. International Journal of Case Reports and Images 2014;5(5):387–390.

doi:10.5348/ijcri-201476-CR-10387

Negi RC¹, Brij Sharma², Bhupender³, Gaurav Kapoor³, Bal Beer Verma⁴, Ashok Sharma⁵

Affiliations: ¹Senior Resident, Department of Medicine and Gastroenterology, IGMC Shimla, HP, India; ²Assistant Prof, Department of Medicine and Gastroenterology, IGMC Shimla, HP, India; ³Junior Resident, Department of Medicine and Gastroenterology, IGMC Shimla, HP, India; ⁴Associate Professor, Department of Medicine and Gastroenterology, IGMC Shimla, HP, India; ⁵Professor, Department of Medicine and Gastroenterology, IGMC Shimla, HP, India.

Corresponding Author: Dr. Negi RC, Lane-I, Sect.-II, New Shimla, Shimla, Himachal Pradesh, India, 171009; Ph: +919418083666, +911772670080
Contact E-mail ID: rcnegi@yahoo.co.in

Received: 27 August 2012
Accepted: 15 October 2012
Published: 1 May 2014

INTRODUCTION

Hemobilia is a rare cause of gastrointestinal (GI) bleeding which develops as a result of communication between blood vessel and biliary tract [1]. Posttraumatic pseudoaneurysm of hepatic artery is seen in 1% of hepatic injury [2]. It should be considered in patients presenting with upper gastrointestinal bleeding with prior history of abdominal trauma. The patients commonly present with either hematemesis or melena but may also present with abdominal pain or jaundice. High index of suspicion is required for the diagnosis of hemobilia

CASE REPORT

A 27-year-old male presented with complaints of one episode of hematemesis seven days back and

melenas for seven days. There was a history of roadside accident one and a half months before with grade IV liver injury, revealed on computed tomography (CT) scan of the abdomen. Patient was managed conservatively in Department of Surgery and discharged from hospital after one week in stable condition. On examination, the patient was anemic, pulse 110/min, blood pressure 80/50 mmHg with postural fall in blood pressure. The systemic examination was normal. Clinical possibility of upper GI bleed was kept. Emergency investigation revealed hemoglobin 4.5 g/dL, TLC 4900/mm³. BU 30 mg%, S. cr.-1.0 mg%, and electrolytes Na-135 mEq/L, K-4.1 mEq/L, Cl-105. The nasogastric tube drainage was persistently revealed altered blood. The patient was stabilized with three units of blood transfusion and emergency esophagogastroduodenoscopy was done. The esophagogastroduodenoscopy revealed alerted blood in the stomach with large clot in the fundus but source was not evident, first and second part of duodenum was also normal, but blood was present. On visualizing the ampulla, there was evidence of blood coming from ampulla. Emergency computed tomography angiography revealed pseudoaneurysm in segment VIII of liver involving segmental branches of right hepatic artery with active bleeding with communication with biliary radicals, with blood in gallbladder, common bile duct and second part of duodenum with subcapsular hematoma in segment VIII (Figure 1). The digital selective arteriography revealed pseudoaneurysm from segmental branches of right hepatic artery (Figure 2). Embolization was done and post embolization digital selective arteriography revealed complete non opacification of pseudoaneurysm (Figure 3).

Figure 2: Digital selective arteriography showing pseudoaneurysm in segmental branches of right hepatic artery.

Figure 3: Post DSA revealed complete non opacification of pseudoaneurysm.

Figure 1: Axial section computed tomography angiography showing pseudoaneurysm in segmental branches of right hepatic artery.

DISCUSSION

Hemobilia is defined as bleeding into the biliary tree from abnormal communication between blood vessel and bile duct [1]. Sandworm and Mirkovitch described hepatic artery pseudoaneurysm formation after blunt trauma or penetrating trauma to liver, after percutaneous diagnostic or therapeutic procedures on hepatobiliary system [2]. The mean time period between traumatic hepatic injury and presentation of patients with hemobilia is reported to be four weeks [3]. The most common cause of posttraumatic hemobilia is a pseudoaneurysm. The classic hemobilia triad described by Quinke in 1871 consists of upper gastrointestinal bleeding (hematemesis 60% or melena 90%) and biliary colic (70%) and obstructive jaundice in 70% of cases [4]. The classic triad is absent in almost 70% of cases and in such cases clinical diagnosis is difficult to suspect [5]. The hemobilia may be minor or major, in minor hemobilia minor bleeding stops spontaneously whereas in hemobilia major the

blood flows rapidly into the duodenum presenting as melena or hematemesis. Earlier the most common cause of hemobilia was accidental trauma but nowadays the common cause is iatrogenic injury to liver due to liver biopsy or percutaneous interventions [6]. In a study done by Srivastava et al. from India the predominant cause of hemobilia was liver injury following roadside accidents [7]. The hemobilia should be suspected in patients with prior history of abdominal trauma presenting with upper gastrointestinal bleeding. The presenting case also had a history of abdominal trauma which was managed conservatively. The patient presented with hematemesis and melena after four weeks of abdominal trauma.

In such patients esophagogastroduodenoscopy will reveal altered blood and clot in stomach and duodenum but without apparent source of active bleeding. The blood may be seen in ampulla. The gold standard diagnostic investigation is angiography to localize the site of bleeding but in the present era CT scan and magnetic resonance imaging (MRI) scan are also used for diagnostic purpose as non-invasive technique [7, 8]. The selective arterial embolization of pseudoaneurysm is the procedure of choice for management of hemobilia. Surgery is required in case refractory to embolization [9]

CONCLUSION

Hemobilia is a rare cause of upper gastrointestinal bleeding due to posttraumatic pseudoaneurysm and it should be diagnosed promptly. High index of suspicion is needed for diagnosis. Angiography is the choice of investigation for localization of bleed and embolization is the treatment of choice.

Author Contributions

Negi RC – Substantial contributions to conception and design, Acquisition of data, Analysis and interpretation of data, Drafting the article, Revising it critically for important intellectual content, Final approval of the version to be published

Brij Sharma – Analysis and interpretation of data, Drafting the article, Revising it critically for important intellectual content, Final approval of the version to be published

Bhupender – Analysis and interpretation of data, Drafting the article, Revising it critically for important intellectual content, Final approval of the version to be published

Gaurav Kapoor – Analysis and interpretation of data, Drafting the article, Revising it critically for important intellectual content, Final approval of the version to be published

Bal Beer Verma – Analysis and interpretation of data, Drafting the article, Revising it critically for important intellectual content, Final approval of the version to be published

Ashok Sharma– Analysis and interpretation of data, Drafting the article, Revising it critically for important intellectual content, Final approval of the version to be published

Guarantor

The corresponding author is the guarantor of submission.

Conflict of Interest

Authors declare no conflict of interest.

Copyright

© 2014 Negi RC et al. This article is distributed under the terms of Creative Commons Attribution License which permits unrestricted use, distribution and reproduction in any medium provided the original author(s) and original publisher are properly credited. Please see the copyright policy on the journal website for more information.

REFERENCES

1. Sandholm P. Hemorrhage into the biliary tract following trauma; traumatic hemobilia. *Surgery* 1948;24(3):571–86.
2. Sandholm P, Mirkovitch V. Haemobilia some salient features and their causes. *Br J Surg* 2001;88:7734.
3. Wani NA, Gojwari TA, Khan NA, KosarTL. Haemobilia in child due to right hepatic artery Pseudoaneurysm: multidetector row computed tomography demonstration. *Saudi J Gastroenterol* 2011 Mar-Apr;17(2):152–4.
4. Quinke H. Ein fall von Aneurysm der Leberarterie. *Klin Wochenschr* 1871;8:349–51.
5. Sidhu MK, Shaw DW, Daly CP, Waldhausen JH, Coldwell D. Post-traumatic hepatic pseudoaneurysms in children. *Pediatr Radiol* 1999;29(1):46–52.
6. Yoshida J, Donahue PE, Nyhus LM. Hemobilia: review of recent experience with a worldwide problem. *Am J Gastroenterol* 1987;82(5):448–53.
7. Srivastava DN, Sharma S, Pal S, et al. Transcatheter arterial embolisation in the management of hemobilia. *Abdom Imaging* 2006;31(4):439–48.
8. Hugel H, Oser W, Bodner E. Aneurysm of the proper hepatic artery as a source of upper gastrointestinal bleeding. *Gastrointestinal Radiology* 1986;11(2):158–60.
9. Green MH, Duell RM, Johnson CD, Jamieson NV. Haemobilia. *Br J Surg* 2001;88(6):773–86.

Access full text article on
other devices

Access PDF of article on
other devices

Edorium Journals: An introduction

Edorium Journals Team

About Edorium Journals

Edorium Journals is a publisher of high-quality, open access, international scholarly journals covering subjects in basic sciences and clinical specialties and subspecialties.

Invitation for article submission

We sincerely invite you to submit your valuable research for publication to Edorium Journals.

But why should you publish with Edorium Journals?

In less than 10 words - we give you what no one does.

Vision of being the best

We have the vision of making our journals the best and the most authoritative journals in their respective specialties. We are working towards this goal every day of every week of every month of every year.

Exceptional services

We care for you, your work and your time. Our efficient, personalized and courteous services are a testimony to this.

Editorial Review

All manuscripts submitted to Edorium Journals undergo pre-processing review, first editorial review, peer review, second editorial review and finally third editorial review.

Peer Review

All manuscripts submitted to Edorium Journals undergo anonymous, double-blind, external peer review.

Early View version

Early View version of your manuscript will be published in the journal within 72 hours of final acceptance.

Manuscript status

From submission to publication of your article you will get regular updates (minimum six times) about status of your manuscripts directly in your email.

Our Commitment

Six weeks

You will get first decision on your manuscript within six weeks (42 days) of submission. If we fail to honor this by even one day, we will publish your manuscript free of charge.

Four weeks

After we receive page proofs, your manuscript will be published in the journal within four weeks (31 days). If we fail to honor this by even one day, we will publish your manuscript free of charge and refund you the full article publication charges you paid for your manuscript.

Mentored Review Articles (MRA)

Our academic program "Mentored Review Article" (MRA) gives you a unique opportunity to publish papers under mentorship of international faculty. These articles are published free of charges.

Most Favored Author program

Join this program and publish any number of articles free of charge for one to five years.

Favored Author program

One email is all it takes to become our favored author. You will not only get fee waivers but also get information and insights about scholarly publishing.

Institutional Membership program

Join our Institutional Memberships program and help scholars from your institute make their research accessible to all and save thousands of dollars in fees make their research accessible to all.

Our presence

We have some of the best designed publication formats. Our websites are very user friendly and enable you to do your work very easily with no hassle.

Something more...

We request you to have a look at our website to know more about us and our services.

We welcome you to interact with us, share with us, join us and of course publish with us.

Edorium Journals: On Web

Browse Journals

CONNECT WITH US