Large Subcapsular Hematoma of the Liver Due to Faja Corset: A Rare Case Report

Sheharyar Minhas  
*Nazareth Hospital*

Ahmed Minhas  
*East Tennessee State University*, minhas@etsu.edu

Maira Malik  
*East Tennessee State University*, malikm@etsu.edu

Phaniram Sumanam  
*Nazareth Hospital*

---

Follow this and additional works at: [https://dc.etsu.edu/etsu-works](https://dc.etsu.edu/etsu-works)

---

**Citation Information**

Minhas, Sheharyar; Minhas, Ahmed; Malik, Maira; and Sumanam, Phaniram. 2020. Large Subcapsular Hematoma of the Liver Due to Faja Corset: A Rare Case Report. *Egyptian Liver Journal*. Vol.10(1).  
[https://doi.org/10.1186/s43066-020-00041-z](https://doi.org/10.1186/s43066-020-00041-z)  
ISSN: 2090-6218

---

This Article is brought to you for free and open access by the Faculty Works at Digital Commons @ East Tennessee State University. It has been accepted for inclusion in ETSU Faculty Works by an authorized administrator of Digital Commons @ East Tennessee State University. For more information, please contact digilib@etsu.edu.
Large Subcapsular Hematoma of the Liver Due to Faja Corset: A Rare Case Report

Copyright Statement
© The Author(s). 2020 Open Access This article is licensed under a Creative Commons Attribution 4.0 International License, which permits use, sharing, adaptation, distribution and reproduction in any medium or format, as long as you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons licence, and indicate if changes were made. The images or other third party material in this article are included in the article's Creative Commons licence, unless indicated otherwise in a credit line to the material. If material is not included in the article's Creative Commons licence and your intended use is not permitted by statutory regulation or exceeds the permitted use, you will need to obtain permission directly from the copyright holder. To view a copy of this licence, visit http://creativecommons.org/licenses/by/4.0/

Creative Commons License

This work is licensed under a Creative Commons Attribution 4.0 International License.

This article is available at Digital Commons @ East Tennessee State University: https://dc.etsu.edu/etsu-works/9386
Large subcapsular hematoma of the liver due to faja corset: a rare case report

Sheharyar Minhas 1,2,*, Ahmed Minhas 3, Maira Malik 3 and Phaniram Sumanam 1

Abstract

Background: Subcapsular hematoma of the liver is an extremely rare but potentially life-threatening condition. It is most commonly associated with blunt abdominal trauma, with the liver after spleen being the second most common abdominal organ injured during blunt trauma. Predisposing causes of liver hematoma include its large size and proximity to fixed structures. To date, no cases have been reported of subcapsular liver hematoma associated with tight clothing such as corsets. Our case report is about the first case of subcapsular hematoma of the liver caused by using a tight faja corset in a young healthy female.

Case presentation: A forty-five-year-old Hispanic female without any significant past medical history was admitted to a community hospital with sudden onset epigastric and right upper quadrant abdominal pain radiating to the back. She denied any nausea, vomiting, fever, or chills. Further examination revealed a subcapsular hematoma of the liver that was confirmed on imaging. The patient was managed with interventional radiology (IR)-guided aspiration drainage of the hematoma and was subsequently discharged home.

Conclusions: Subscapular liver hematomas need to be considered in patients presenting with acute onset abdominal pain after wearing certain tight clothing. The necessity of an early and accurate diagnosis is vital for management as hemodynamically stable patients can be managed conservatively. Our patient was managed with IR-guided aspiration drainage of the hematoma. Surgery can be considered a last resort in case of life-threatening hemodynamic instability, peritoneal signs, free abdominal fluid, and failure of arterial embolization. Our case highlights the importance of early recognition of traumatic subcapsular hematomas to prevent life-threatening complications.

Keywords: Subcapsular hematoma, Corset, Liver, Baja, Surgical intervention, Case report
Fig. 1 Initial CT abdomen/pelvis (cross-sectional view)

Fig. 2 Initial CT abdomen/pelvis (coronal view)
history revealed that she wore a faja corset for a cultural event the night prior to hospital presentation. Patient did not report any other signs of trauma, fall, or history of abdominal surgery. She denied any trauma, fall, or history of abdominal surgery. Initial vitals were normal with temperature 36.8 °C, pulse 93, blood pressure 115/67, and saturation 98% on room air. Urine drug screen was negative. Beta-human chorionic gonadotropin (β-HCG) was negative. Laboratory workup was unremarkable with hemoglobin 12.3. Physical exam was noted for a hyposthenic body habitus. Abdominal exam findings were unremarkable except for some mild right upper quadrant tenderness and the liver was noted to be higher in the abdominal cavity. CT abdomen with contrast revealed a 5.5 × 4.2 × 14.2 cm subcapsular liver hematoma along the anterior aspect of the lateral left hepatic lobe (Figs. 1 and 2). It was also noted for an elongated cartilaginous tip of the xiphoid process (Fig. 3). Surgery team evaluated the patient and no intervention was recommended. She was subsequently discharged home.

Discussion
A subcapsular hematoma of the liver is an accumulation of blood between the liver parenchyma and Glisson’s capsule. It has a 75% mortality rate if it ruptures into the peritoneal cavity [1]. In 75% of patients, it is located around the right lobe of the liver and only 25% of patients have involvement of the left lobe of the liver. Symptoms manifest as abdominal pain, anemia, hypotension, fever, and peritonism. Risk factors include blunt trauma, iatrogenic injuries following endoscopic retrograde cholangiopancreatography, anticoagulation treatment, liver tumors, hepatic adenomatosis, peliosis.
hepatis, hemodialysis, preeclampsia, and the HELLP syndrome [2, 3].

Our case is unique without any of the above risk factors commonly associated with hepatic subcapsular hematoma. One possible mechanism of hepatic hematoma in our patient is that an increase in intraabdominal pressure associated with tight clothing compresses the xiphoid process and results in bony trauma. The necessity of an early and accurate diagnosis in subcapsular hepatic hematomas derives its importance as
patients who are hemodynamically stable can be managed conservatively. These patients are stable with a limited, peripheral, and non-compressive hematoma. Our patient was initially managed conservatively and discharged home after an observation period of 24 h. She presented to the hospital the following day with worsening symptoms and enlarging size of hepatic hematoma.

CT abdomen is the imaging of choice for diagnosing subcapsular hematoma of the liver. On CT imaging, the acute hematoma looks like a lenticular, ellipsoid, perihepatic collection that is typically, hyperdense (40–60 HU) due to its high protein content [4]. Although rare, these hepatic hematomas have potential to rupture that can rapidly lead to hemodynamic instability and death [5]. Therefore, these need close monitoring in an acute care setting. Patients can be safely discharged home if hemodynamically stable after a close period of observation.

Subcapsular hematomas of the liver associated with hemodynamic compromise, significant drop in hemoglobin, and in the presence of rapid expansion in size should have a low threshold for radiological or surgical intervention. Our patient was readmitted with worsening abdominal pain in the presence of increase in size of the hematoma. She subsequently underwent IR-guided drainage procedure of the hematoma. If IR-guided drainage does not result in resolution of the hematoma, then an arterial embolization performed by interventional radiology should be attempted. Surgery should be considered a last resort in case of life-threatening hemodynamic instability, peritoneal signs, free abdominal fluid, and failure of arterial embolization.

Conclusions
Subcapsular liver hematomas can be observed in patients presenting with an acute onset abdominal pain after wearing certain tight clothing such as corsets. The necessity of an early and accurate diagnosis is vital for management as hemodynamically stable patients can be managed conservatively. Surgical intervention is necessary for subcapsular hematomas of the liver associated with hemodynamic instability. Traumatic liver subcapsular hematomas can be observed in hemodynamically stable patients and it is a real challenge for surgeons.

Acknowledgements
None

Disclosures
There is no relationship with any industry

Authors’ contributions
All authors have read and approved the manuscript. SM: leading author, supervised, implemented study, and final review. AM: worked on introduction. MM: worked on conclusion. PS: working on clinical case and provided review/editing

Authors’ information
None

Funding
The authors received no funding for the study.

Availability of data and materials
Not applicable

Ethics approval and consent to participate
Ethics approval was waived for this case report; not applicable

Consent for publication
Written consent to publish this information was obtained from the case subject.

Competing interests
The authors declare that they have no competing interests.

Author details
1Department of Internal Medicine, Nazareth Hospital, 2601 Holme Avenue, Philadelphia, PA 19152, USA. 2Rollins School of Public Health, Emory University, Atlanta, GA, USA. 3Department of Internal Medicine, East Tennessee State University, Johnson City, TN, USA.

Received: 14 May 2020 Accepted: 24 June 2020
Published online: 24 August 2020

References

Publisher’s Note
Springer Nature remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.