



# CASE REPORT

## PYOGENIC LIVER ABSCESS: ATYPICAL PRESENTATION

Abuoma C. Ekpendu, DO<sup>1</sup>, Gregory Gandarillas, DO<sup>1</sup>, Erik Polan DO, FACOI<sup>1,2</sup>

1. Transitional Year Residency, Philadelphia College of Osteopathic Medicine, Philadelphia, PA.

2. Department of Internal Medicine, Philadelphia College of Osteopathic Medicine, Philadelphia, PA.

### INTRODUCTION

Liver abscesses are reported to be the most common type of visceral abscess with incidence higher in men than women. Risk factors of liver abscesses include diabetes mellitus, underlying hepatobiliary or pancreatic disease, liver transplant, and regular use of proton-pump inhibitors.

The typical signs and symptoms of pyogenic liver abscess include fever, abdominal pain (usually involving the right upper quadrant), nausea, vomiting, anorexia, weight loss, hepatomegaly with fever and abdominal pain being the most common.

We present an interesting case of an older adult male patient diagnosed with liver abscess without the typical risk factors or common signs and symptoms of abdominal pain, nausea, vomiting, anorexia, weight loss or hepatomegaly.

### METHOD

We present a case report of a 78 year old male with PMH of prostatic hypertrophy, aortic valve disease, hyperlipidemia, who presented to the Emergency Department of a small community hospital with confusion, fevers, chills and night sweats status post fall.

Emergency room evaluation with abdominal ultrasound demonstrated a 6cm heterogeneous peripherally hypervascular mass involving the central aspect of the right lobe of the liver. The patient was admitted for sepsis and further evaluation and management of liver mass.

We discuss the evaluation and management of a hepatic abscess. We also demonstrate the Osteopathic Tenets associated with the management of our patient.

### RESULTS & DISCUSSION

A CT abdominal and pelvis with IV contrast was obtained, which showed approximately 6 cm predominantly cystic mass involving the right lobe of the liver. The patient was treated with piperacillin/tazobactam and blood cultures remained negative throughout his hospital stay at the community hospital.

Based on specialist recommendations he was transferred to a tertiary facility where he underwent a drainage of the hepatic lesion by interventional radiology (IR). 130 milliliters (mL) of purulent discharge were removed confirming a hepatic abscess; a drain catheter was left in place.

Repeat limited ultrasound of the abdomen showed interval resolution of the abscess. He was discharged four days following the drain placement on oral Augmentin for 6 weeks with scheduled outpatient follow up with interventional radiology for exchange of the drain.

#### Models of Osteopathic Care and Osteopathic Manipulative Treatment

In a patient with an abscess, we expect lymphatic congestion from inflammation; muscle hypertonicity and fascial tension over the affected region.

Goals of OMT in this patient include decreasing sympathetic activity, which will allow for increased lymphatic drainage, reducing muscle hypertonicity and fascial tension.

The thoracic pump, which is a lymphatic technique (respiratory-circulatory model) will increase lymphatic drainage, decrease congestion, and allow for improved healing. Rib raising, a soft tissue technique (circulatory model), will decrease sympathetic activity, improve lymphatic drainage, and improve respiration.

### CONCLUSION

There is limited literature regarding the presentation of liver abscess without abdominal pain, nausea and vomiting.

This case underlines the importance of including hepatic abscesses on the differential diagnosis, especially in patients without typical clinical manifestations and risk factors described.

We reviewed the therapeutic and diagnostic approach to this particular disease process; including the multidisciplinary approach needed to provide appropriate care, and how utilizing Osteopathic Philosophy can assist in the care of our patient.

### REFERENCES

- Houston H, Kumar K, Sajid S. Asymptomatic pyogenic liver abscesses secondary to *Fusobacterium nucleatum* and *Streptococcus vestibularis* in an immunocompetent patient. *BMJ Case Rep.* 2017 Sep 23;2017:bcr2017221476. doi: 10.1136/bcr-2017-221476. PMID: 28942408; PMCID: PMC5747695.
- Sotto Mayor J, Robalo MM, Pacheco AP, Esperança S. Pyogenic liver abscess: uncommon presentation. *BMJ Case Rep.* 2016 May 11;2016:bcr2016214841. doi: 10.1136/bcr-2016-214841. PMID: 27170608; PMCID: PMC4885255.
- Nasr B, Derbel F, Barka M, et al. Presentation and management of pyogenic liver abscess in surgery department: About 34 cases. *Journal of Gastroenterology and Hepatology Research.* <http://www.ghrnet.org/index.php/joghr/article/view/922/1042>. Published November 21, 2014. Accessed April 8, 2023.
- Akhondi H, Sabih DE. Liver Abscess. [Updated 2022 Jul 4]. In: *StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing; 2023 Jan-. Available from: <https://www.ncbi.nlm.nih.gov/books/NBK538230/>*

