

UC Irvine

Western Journal of Emergency Medicine: Integrating Emergency Care with Population Health

Title

Turbid Peritoneal Fluid

Permalink

<https://escholarship.org/uc/item/45t526dx>

Journal

Western Journal of Emergency Medicine: Integrating Emergency Care with Population Health, 17(2)

ISSN

1936-900X

Authors

Burleson, Samuel L.
Wang, Henry E.

Publication Date

2016

DOI

10.5811/westjem.2016.1.29444

Copyright Information

Copyright 2016 by the author(s). This work is made available under the terms of a Creative Commons Attribution License, available at <https://creativecommons.org/licenses/by/4.0/>

Peer reviewed

Turbid Peritoneal Fluid

Samuel L. Burlison, MD
Henry E. Wang, MD, MS

University of Alabama School of Medicine, Department of Emergency Medicine,
Birmingham, Alabama

Section Editor: Rick A. McPheeters, DO

Submission history: Submitted December 7, 2015; Revision received December 31, 2015; Accepted January 5, 2016

Electronically published March 2, 2016

Full text available through open access at http://escholarship.org/uc/uciem_westjem

DOI: 10.5811/westjem.2016.1.29444

[West J Emerg Med. 2016;17(2):189–190.]

CASE

A 58-year-old female with a past medical history of hepatitis C virus-induced cirrhosis presented to the emergency department with three days of increasing abdominal pain, chills, and nausea and vomiting. Abdominal physical examination revealed gross ascites with fluid wave. Diagnostic paracentesis resulted in the aspiration of approximately 60mL of white turbid peritoneal fluid (Figure).

DISCUSSION

The differential diagnosis of turbid peritoneal fluid includes spontaneous bacterial peritonitis, chylous ascites,

and pseudo-chylous ascites. Spontaneous bacterial peritonitis is suggested by a predominance of polymorphonuclear cells, a positive Gram stain or a positive culture.¹ Chylous ascites refers to increased concentration of triglycerides ($>200\text{mg/dL}$)² in the peritoneal fluid, typically the result of traumatic lymphatic obstruction, tumor, tuberculosis, filariasis, congenital abnormalities or nephrotic syndrome.^{1,2} Cirrhosis may cause up to 11% of atraumatic chylous ascites.³ Pseudo-chylous ascites results from degeneration of leukocytes or tumor cells without high levels of triglycerides or active infection.⁴ Chylous and pseudo-chylous ascites may be differentiated by triglyceride levels.¹

Given the patient's established history of chronic liver disease, the inpatient team focused on spontaneous bacterial peritonitis as the potential etiology for the turbid peritoneal fluid. The patient was treated empirically with antibiotics. Formal abdominal ultrasonography affirmed a cirrhotic liver with large volume ascites and no evidence of mass. Peritoneal fluid cultures were negative for bacterial growth, suggesting that the fluid represented sterile ascites. Triglyceride assays were not performed. Repeat paracentesis on hospital day 3 revealed straw-colored peritoneal fluid. The patient was discharged home on hospital day 4 after clinical improvement.

Address for Correspondence: Henry E. Wang, MD, MS, University of Alabama at Birmingham, Department of Emergency Medicine, 619 19th Street South, OHB 251, Birmingham, AL 35249. Email: hwang@uabmc.edu.

Conflicts of Interest: By the WestJEM article submission agreement, all authors are required to disclose all affiliations, funding sources and financial or management relationships that could be perceived as potential sources of bias. The authors disclosed none.

Copyright: © 2016 Burlison et al. This is an open access article distributed in accordance with the terms of the Creative Commons Attribution (CC BY 4.0) License. See: <http://creativecommons.org/licenses/by/4.0/>

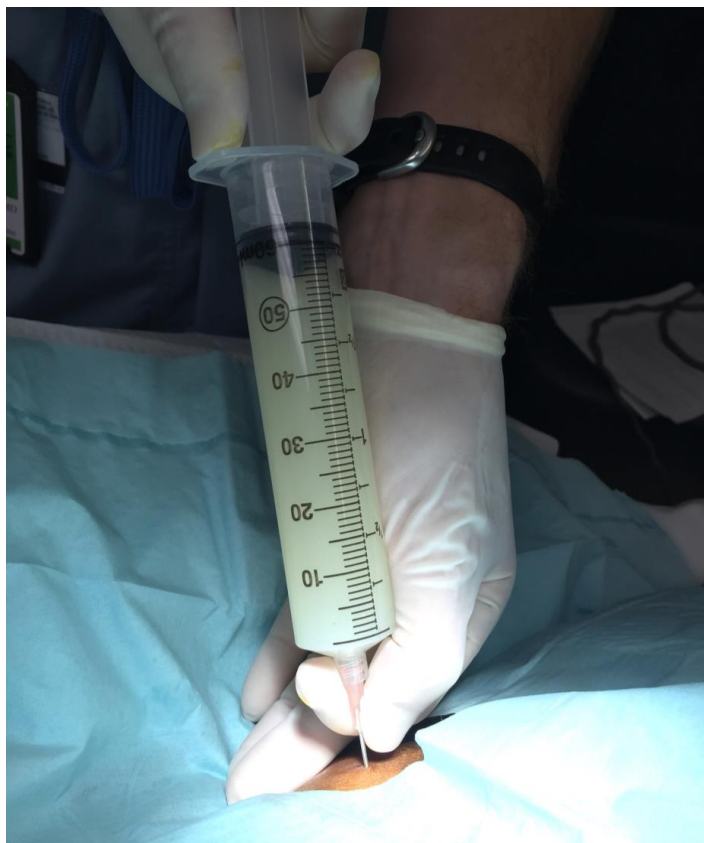


Figure. Peritoneal fluid aspirated from diagnostic paracentesis.

REFERENCES

1. Kasper DL, Braunwald E, Fauci AS, et al. Harrison's principles of internal medicine, McGraw-Hill, New York, New York, USA, 16th edition, 2005.
2. Al-Busafi SA, Ghali P, Deschênes M, et al. Chylous ascites: evaluation and management. 2014.
3. Steinemann DC, Dindo D, Clavien PA, et al. Atraumatic chylous ascites: systematic review on symptoms and causes. *J Am Coll Surg.* 2011;212(5):899-905.
4. Runyon BA, Akriviadis EA, Keyser AJ. The opacity of portal hypertension-related ascites correlates with the fluid's triglyceride concentration. *Am J Clin Pathol.* 1991;96(1):142-3.