

Abstract

While there are numerous causes of ascites, the most common cause in the US is cirrhosis (>80%). Other common causes include malignancy (10%), heart failure (3%), and tuberculosis. Less than 5% of patients will have >1 cause for ascites at time of presentation. Due to similar presentations of advanced ovarian cancer and decompensated cirrhosis, Ca-125 levels are frequently assessed and used as a diagnostic tool for malignancy in those patients. Studies have shown CA-125 elevation in those with ascites, especially in postmenopausal women, can often lead to inappropriate testing and procedures sometimes including exploratory laparotomies. Elevated Ca-125 and ascites remains a confusion combination to many, leaving studies questioning whether checking CA-125 in patients with ascites is beneficial or harmful.

Case Description

74-year-old woman with medical history of CAD presented to the ED with a primary complaint of right sided back pain, radiating to RUQ of abdomen. Onset weeks prior to presentation, but acutely worsened overnight.

- Family history significant for NASH and HCC.
- Significant ascites on presentation, hepatomegaly, and shifting dullness
- CT abdomen/pelvis: right sided pleural effusion, significant ascites, and focal fatty infiltration of the left lobe of the liver. **No abnormalities of the pelvic organs.**
- Abdominal US: cirrhotic, enlarged liver.
- **CA- 125 significantly elevated (781)**
- Pelvic US: no abnormalities. Transvaginal US: Patient declined.

Images

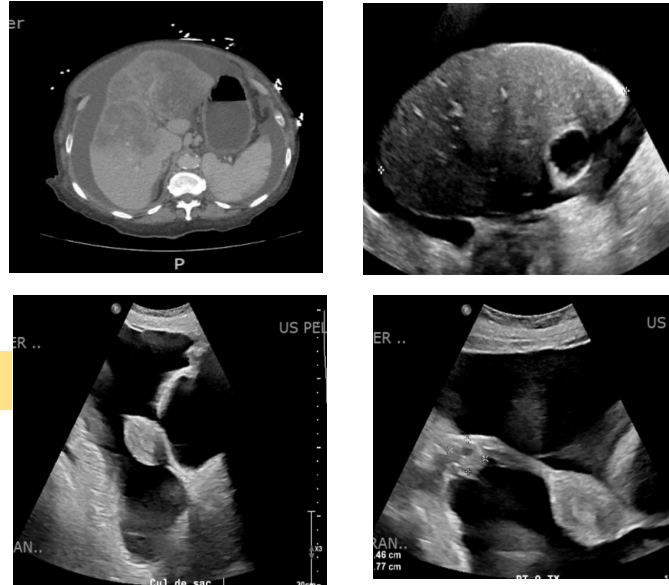


Image 1: Ascites and focal fatty infiltration of the left lobe of the liver

Image 2: Abdominal US: cirrhotic, enlarged liver

Image 3 & 4: Pelvic ultrasound (limited view of ovaries): No abnormalities.

References

- 1.Silberstein LB, Rosenthal AN, Coppack SW, Noonan K, Jacobs IJ. Ascites and a raised serum Ca 125--confusing combination. J R Soc Med. 2001 Nov;94(11):581-2. doi: 10.1177/014107680109401107. PMID: 11691896; PMCID: PMC1282244.
- 2.Zuckerman E, Lanir A, Sabo E, Rosenvald-Zuckerman T, Matter I, Yeshurun D, Eldar S. Cancer antigen 125: a sensitive marker of ascites in patients with liver cirrhosis. Am J Gastroenterol. 1999 Jun;94(6):1613-8. doi: 10.1111/j.1572-0241.1999.01152.x. PMID: 10364033.
- 3.Charkhchi P, Cybulski C, Gronwald J, Wong FO, Narod SA, Akbari MR. CA125 and Ovarian Cancer: A Comprehensive Review. Cancers (Basel). 2020 Dec 11;12(12):3730. doi: 10.3390/cancers12123730. PMID: 33322519; PMCID: PMC7763876.

Discussion

While there are numerous causes of ascites, the most common cause in the US is cirrhosis (>80%). Other common causes include malignancy (10%), heart failure (3%), and tuberculosis. Less than 5% of patients will have >1 cause for ascites at time of presentation. Symptoms most associated with ascites secondary to cirrhosis are early satiety, dyspnea, and progressive abdominal distension, which are non-specific and can be seen with many other etiologies. The presence of spider angiomas, palmar erythema, and abdominal collaterals should lead the clinician to identify cirrhosis as underlying cause. Clinical presentation/HPI, medical history, social and family history, age, and physical examination are important in differentiating the most likely cause from the least likely causes in addition to imaging.

Conclusion

It is well known that elevated CA-125 is not only associated with ovarian malignancy, but also ascites secondary decompensated cirrhosis. The cause of elevated CA 125 in ascites is not well understood, but possibly 2/2 to omental stretching. It is not recommended to check ca 125 levels in those with ascites, as it is commonly elevated regardless of etiology. Given similarities of the presentation of both ovarian cancer and decompensated cirrhosis, evaluation of CA 125 levels may lead to inappropriate medical evaluation to pursue the diagnosis of ovarian cancer including transvaginal ultrasounds and exploratory laparotomy which can lead to further decompensation in those with cirrhosis. This case highlights the importance of using a patient centered approach, clinical reasoning, and evidence-based reasoning for guidance when evaluating patients with ascites with a non-specific presentation.