Spontaneous Fungal Peritonitis: A Rare Complication of Ascites Secondary to Right Heart Failure: A Case Report

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**Spontaneous Fungal Peritonitis: A Rare Complication of Ascites Secondary to Right Heart Failure: A Case Report**

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**Introduction**

Spontaneous fungal peritonitis (SFP) is an infection defined as a neutrophil count (> 250 cells/mL) in ascitic fluid with the absence of positive fungal culture,[1,2] while excluding other intra-abdominal infections. SFP is not as common as spontaneous bacterial peritonitis and has higher mortality rates due to late recognition and difficulty in differentiation between SFP and SBP.[3,4] The common risk factors that have shown to increase the mortality for SFP include hepatic encephalopathy, patient on SVP prophylaxis, elevated APACHE II scores on admission, and elevated lactate levels.[5-7] Candida albicans and Candida glabrata are the two most common fungal pathogens responsible for SFP in the cirrhotic population.[8] Spontaneous fungal peritonitis is an uncommon phenomenon occurring in a patient with cardiac ascites because of high protein content which is generally considered a low risk for infections. Signs and symptoms are indistinguishable from SBP, which may include abdominal pain, distension, guarding, fever, and/or tachycardia.[9,10]

**Methods**

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**Case**

A 52-year-old female with a past medical history of chronic obstructive pulmonary disease was admitted to the hospital with a two-week history of abdominal pain and shortness of breath. The abdominal pain was associated with worsening dyspnea. Upon admission, she was febrile with T=101.1°F, tachycardic with a heart rate of 110 beats/min, and blood pressure of 100/60 mmHg. Cardiovascular examination revealed decreased breath sounds on bilateral lung bases. The respiratory examination revealed decreased breath sounds on bilateral lung bases. The respiratory examination revealed decreased breath sounds on bilateral lung bases. The respiratory examination revealed decreased breath sounds on bilateral lung bases. The respiratory examination revealed decreased breath sounds on bilateral lung bases. The respiratory examination revealed decreased breath sounds on bilateral lung bases.

**CT scan demonstrating a moderate amount of ascites, with peritoneal thickening and enhancement consistent with peritonitis.**

**Results**

Cardiac cirrhosis is an uncommon but well-documented condition characterized by the presence of signs and symptoms of chronic liver disease along with the cardiac symptoms of ascites.[11-13] It usually presents with rapid and symptoms consistent with cardiac failure. However, in acute episodes of ascites, it may cause further damage, leading to worsening of the cardiac condition.[14,15] Ascitic fluid should be evaluated for its bacterial and fungal content. Antifungal therapy in the case of positive fungal cultures is mandatory to prevent further progression and improve outcome.[16,17] Blood culture and differential are significant in guiding the diagnosis of spontaneous peritonitis (polymicrobial or neutrophilic leukocytosis, 1000 cells/mL). Along with the bacterial gram stain and culture sensitivity, fungal stain and culture sensitivities are necessary due to an increased prevalence of SFP in patients with cirrhosis.[18,19,20]

The most common species causing SFP is Candida albicans, with other common fungal agents being Candida glabrata, Candida krusei, Cryptococcus spp, and Aspergillus spp.[21,22] Risk factors for SFP include elevated Child-Pugh and MELD scores; prior peritonitis, low ascites fluid lactate (< 20 mg/dL); recent hospitalization; and prolonged mechanical ventilation.[23,24]

**Conclusion**

To conclude, SFP is considered a serious complication of cardiac cirrhosis. A better understanding of the etiology of SFP with a quick diagnosis should be done promptly with an urgent evaluation of ascitic fluid and treatment with broad-spectrum antifungal therapy.

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**References**

4. Karvellas et al also showed that the delay in the diagnosis and treatment of SFP can lead to poor prognosis with a mortality of 50%. Documentation to Kubose, Fluorescein isomerization test sensitivity tests are available, which is also beneficial in reducing the risk of resistant organisms.