

Acute Hypoxic Respiratory Distress due to TRALI in a patient with Cirrhosis and Severe Sepsis

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INTRODUCTION

1. TRALI is retrospectively diagnosed, which makes the acuity and severity of illness difficult to manage in real time.
2. Patients with cirrhosis have an increased risk of developing TRALI.
3. There are elevated risks of mortality in cirrhosis, sepsis, and TRALI, as well as
4. Medical management can be tenuous due to conflicting treatment strategies for sepsis and TRALI

DISCUSSION

Studies suggest that cirrhosis is a significant risk of developing TRALI. The proposed mechanism for increased susceptibility is unclear. However, risk factors for these patients include elevated bleeding risk, chronic volume overloaded status, MELD score, septic shock, and chronic hypotension. Given complexity in management of cirrhotic patients, elevated risk of TRALI presents for a very challenging scenario, particularly with sepsis. Early recognition and awareness are critical for optimal medical management.

REFERENCES

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CASE PRESENTATION

A man in his 40's with history of cirrhosis, ascites, and hepatic encephalopathy presented with two days of left back and leg pain. He was admitted for severe sepsis, but later developed hypotension with acute anemia.

Findings: He was febrile, tachycardic, jaundiced with abdominal distention with dullness to percussion. Labs revealed leukocytosis with bandemia, elevated creatinine, hyponatremia, lactic acidosis, hyperbilirubinemia and elevated INR. His MELD-Na score was 32. Blood cultures grew *Escherichia coli*. TTE showed normal EF. Diagnostic paracentesis did not suggest SBP.

Course: He was given IV fluids, vancomycin/cefepime, and 2 units of pRBC. Blood pressure and leukocytosis improved. One hour into the transfusion, the patient endorsed shortness of breath and required 4L NC. Patient continued to have worsening hypoxia and worsening infiltrate on serial chest X-rays. This persisted despite net negative 3 liters output. He became encephalopathic and required urgent intubation. His P/F ratio after intubation was 111. In the ICU, he was treated as acute respiratory distress syndrome with low tidal volume strategy.

Outcome: The onset of his respiratory symptom was associated with pRBC transfusion. He was diagnosed retrospectively with Possible TRALI. His pulmonary infiltrates improved and was extubated 10 days later. He was ultimately discharged to SNF.

FIGURES



Day of Admission



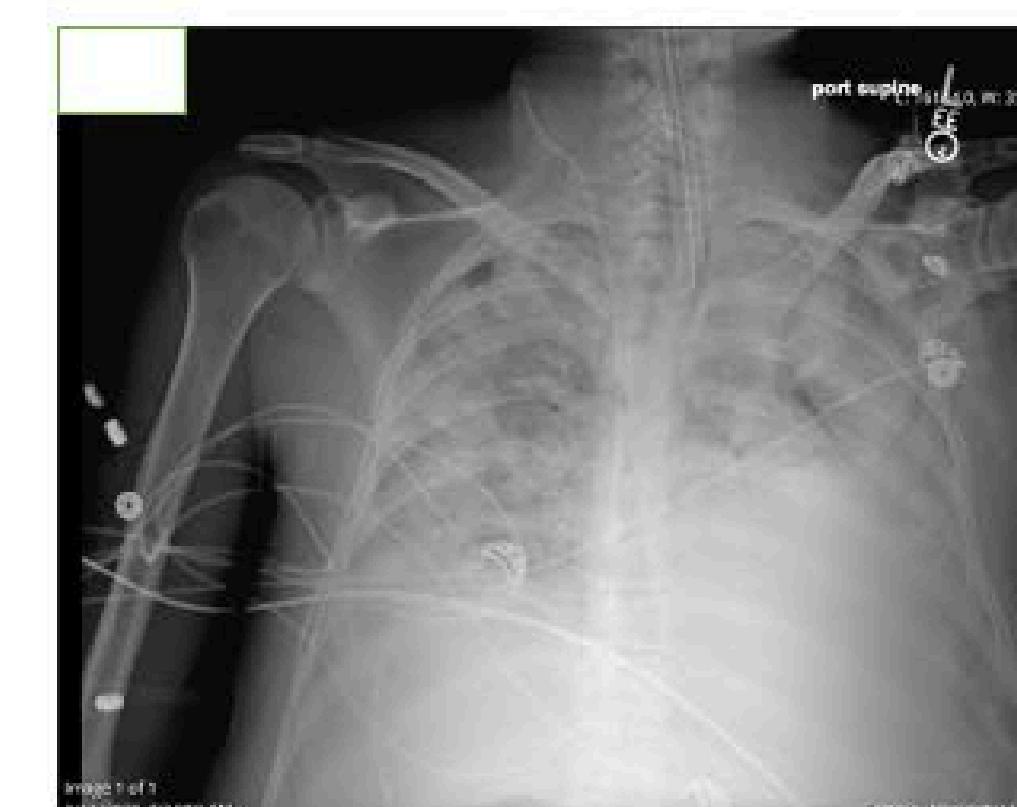
Day 3 of Admission
8 Hours Post
Transfusion



Day 4 of Admission
s/p 2 L diuresis



Day 4 of Admission
s/p Intubation and
3 L diuresis



Day 6 of Admission
ICU Day 3



Admission Day 8
ICU Day 5



Admission Day 13
ICU Day 10



Discharge on Day 17