FATAL CASE OF THROMBOTIC THROMBOCYTOPENIC PURPURA WITH UNDERLYING INVASIVE ASPERGILLOSIS

Shimool A. Rabbani, DO; Ankit V. Shah, DO; Joan Wiley, DO; Jay Kirkham, DO

Rowan University School of Osteopathic Medicine, Department of Medicine, Stratford, New Jersey;
Jefferson Health Hospital NJ Division - Department of Pulmonary Critical Care, W abdoman Township, New Jersey

PRESENTATION

A 70-year-old Caucasian male with history of end stage renal disease status-post kidney transplant in 2015 was admitted to the intensive care unit for encephalopathy of unknown etiology and jaundice.

Home immunosuppressant include tacrolimus, mycophenolate mofetil, and prednisone.

He was diagnosed with severe sepsis secondary to pneumonia, severe thrombocytopenia, acute kidney injury, transaminitis, hyperbilirubinemia and hyperammmonemia.

Patient was started on broad-spectrum antibiotics, high dose methylprednisolone, and lactulose; tacrolimus was held.

Day one: Patient was noted to have severe anuric renal failure and emergent hemodialysis was initiated.

Platelet count and hemoglobin continued to decrease requiring packed red blood cells and platelet transfusion.

Patient had an in calculable LDH, and severely low haptoglobin.

Peripheral smear revealed schistocytes and nucleated RBCs.

Thrombotic thrombocytopenic purpura (TTP) was diagnosed and plasmapheresis was initiated.

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PRESENTATION (CONT.)

Day two: With progressive hypoxic respiratory failure patient was intubated.

PaO2:FIO2 of 158, suggesting moderate acute respiratory distress syndrome (ARDS).

Day three: Patient underwent bronchoscopy (PaO2:FIO2 <100); preliminary gram stain & cultures were negative.

LDH remained in calculable.

Day four: Patient suffered a hypoxic cardiac arrest, and family opted for comfort care measures.

2 days post-mortem the fungal culture and histopathology from the bronchoscopy was positive for aspergillus species.

DISCUSSION

The most common cause of morbidity and mortality in renal transplant patients are infections and their sequelae, including TTP1.

TTP is a rare syndrome characterized by microangiopathic hemolytic anemia, thrombocytopenia, fever, central nervous system abnormalities, and renal impairment2.

There are some case series and meta-analyses in literature tacrolimus-induced TTP.

These has been described as a toxic-dose related mechanism; it is gradual in onset with progressive renal failure within weeks to months3,4.

Aspergillosis is normal pulmonary flora, but can present as a pathologic infection in immunocompromised patients5.

Invasive aspergillosis have been observed in 1.5% of the transplanted renal cases with only 0.4% presenting more than six months following the transplant6.

ARDS with underlying invasive pulmonary aspergillosis is rare but associated with a higher mortality rate6.

Aspergillosis is a rare entity in patients with non-pulmonary organ transplant but can be fatal if it goes undetected.

It is important to investigate any and all potential underlying etiologies in patients presenting with TTP.

We would like to ask the medical community to consider fungal entries early in immunocompromised patients who are refractory to antibiotic therapy.

REFERENCES


6) Fantini F, Cimaz R. A fatal case of systemic lupus erythematosus complicated by acute pancreatitis, invasive aspergillosis

CONCLUSION

Aspergillosis is a rare entity in patients with non-pulmonary organ transplant but can be fatal if it goes undetected. It is important to investigate any and all potential underlying etiologies in patients presenting with TTP.

We would like to ask the medical community to consider fungal entries early in immunocompromised patients who are refractory to antibiotic therapy.