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Ureaplasma-induced hyperammonemia syndrome after lung transplantation: a case report

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Hyperammonemia syndrome, in the absence of liver dysfunction, is an uncommon but potentially fatal complication of lung transplantation. Previous reports have supported *Ureaplasma* species as an etiology for this syndrome. We present a successful treatment of a lung transplant patient with hyperammonemia syndrome with hemodialysis and empirical antibiotics. A 67 years old patient with a history of gout, chronic B-viral hepatitis, and idiopathic pulmonary fibrosis visited the emergency department for abrupt exacerbation of dyspnea. The liver function tests were within the normal range, and the viral load of hepatitis B-virus was not detected with tenofovir. He underwent bilateral lung transplantation on admission day 10. His ammonia level, initially 40 µg/dL (normal range 12–66 µg/dL), started to increase on postoperative day 8, reached as high as 593 µg/dL on postoperative day 13, and was refractory to conventional medical treatment including lactulose enema. After three days of hemodialysis and initiation of empirical levofloxacin treatment, the plasma ammonia level recovered to the normal range and remained unfluctuating. Polymerase chain reaction result for *Ureaplasma urealyticum*, which took two weeks to be tested, was positive. Hyperammonemia syndrome in post-lung transplant is rare, but a recognized complication. It was seen in not only lung-transplant recipients but also other immunocompromised patients, such as patients with hematologic malignancies and other solid organ transplant recipients. *Ureaplasma* species are common inhabitants of the genitourinary tract, and treatment options may include tetracycline, macrolide, and fluoroquinolone antibiotics. It is essential to be aware of *Ureaplasma* species as a cause of hyperammonemia syndrome because it cannot be seen on gram stain as they lack cell walls, and routine bacterial cultures will not identify these organisms. Therefore, empirical antibiotics should be considered in lung transplant recipients with idiopathic hyperammonemia.

Serum ammonia level on each post-operative day

