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Do not Forget the 'Forgotten Disease' in the Covid Era: A Case Report of Lemierre's Disease with a Rare Complication of Acute Renal Failure

PUBLISHED ABSTRACT

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ABSTRACT

Background: Lemierre's disease, also known as the "Forgotten disease", is a rare yet rapidly deteriorating clinical entity associated with high morbidity and mortality. We present a unique case of acute renal failure in Lemierre's Disease which has not been previously reported in published literature.

Case report: An obese 18-year-old female with intermittent asthma presented with a one-week history of sore throat, dysphagia and odynophagia associated with anuria. She was found to be in severe sepsis with tachycardia (163 bpm), hypotension (BP 113/43) and acute renal failure with bilateral tonsillar exudates, mild anterior neck swelling and trismus. Initial labs were also significant for leukocytosis (WBC 29.4 k/ul), transaminitis (AST 1115 u/L, ALT 240 u/L), and severe rhabdomyolysis (creatine kinase 96848 u/L). She received intravenous fluids with good response and started on vancomycin and piperacillin-tazobactam. Initial infectious work-up was negative for group A streptococcus (throat), SARS-CoV-2 PCR and antibody, HIV, RPR, EBV, hepatitis A/B/C. Initial chest x-ray revealed bilateral nodular opacities with likely miliary distribution for which TB evaluation was considered but later aborted. Admitting diagnoses were severe sepsis from soft tissue infection (neck vs. pneumonia) with possible bacteremia and acute renal failure (pre-renal exacerbated by severe rhabdomyolysis). The patient's case was complicated early on by the development of anuric renal failure (creatinine 7.5 mg/dL) and hyperkalemia for which she required hemodialysis by day 3 of hospitalization. Other complications included respiratory distress and hypoxia requiring transient BiPAP support and transiently elevated pro-BNP and troponin which all spontaneously resolved. An echocardiogram revealed borderline normal LV systolic function.

A non-contrast head and neck CT showed asymmetric enlargement of the left parotid gland and palatine tonsil with no obstruction and enlargement of left internal jugular lymph nodes compatible with reactive changes. On the 4th hospital day, the initial blood culture was found to be positive for *Fuscobacterium necrophorum*, for which metronidazole was added pending culture sensitivity results. Due to concerns for septic thromboemboli, contrast CT studies of the head, neck and chest were done

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revealing multiple large bilateral pulmonary nodules with cavitation and bilateral lower lobe consolidation concerning for septic emboli and pneumonia as well as diminished calibre and poor opacification of the left internal jugular (IJV) concerning for thrombosis, solidifying the diagnosis of Lemierre's Disease. A Doppler ultrasound of the neck showed diminished flow through the left IJV and a venogram study confirmed the presence of the left IJV thrombus. In consultation with vascular surgery and interventional radiology specialists, it was decided that medical anticoagulation with heparin was preferable over thrombectomy. An abdominal CT on hospital day 9 further revealed bilateral renal infarcts thought to be from septic emboli. The patient completed a course of piperacillin-tazobactam and transitioned from heparin infusion to apixaban once repeat studies showed resolution of LIJV thrombus. She underwent 8 cycles of dialysis over the period of two weeks with subsequent spontaneous return of adequate renal function without need for further dialysis.

Discussion: Lemierre's disease presents with fever, sore throat, lymphadenopathy, thrombosis of IJV and metastatic infection to other organs, mainly the lungs. This patient's case was uniquely complicated by renal infarcts from septic emboli with acute kidney failure requiring hemodialysis. With antibiotics, anticoagulation and hemodialysis, the patient has fully recovered without any long-term organ system deficits.

COMPETING INTERESTS

The authors have no competing interests to declare.

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