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Introduction

Capnocytophaga canimorsus is a Gram-negative bacillus present in pets. Identifying the germ is challenging and manifestations could be severe if contracted by humans.

Methods

In the case we describe the application of hemadsorption to mitigate the sepsis caused by Capnocytophaga canimorsus.

Case Presentation

A 63-year-old woman was admitted to the emergency department with a hypotensive state, fever, profuse diarrhoea, and diffuse pain. Blood tests indicated pancytopenia, thrombocytopenia, and renal failure. Her creatine phosphokinase (CPK) was 1597 U/L, C-reactive protein (CRP) was 17.22 mg/dL, and troponin was 95 pg/mL. Emogas revealed lactates at 9.1 mmol/L. The patient required noradrenaline at 0.16 mcg/kg/min.

Diagnostic procedures included blood cultures, urine culture, swabs, and stool culture.

On Day 2, conditions worsened, necessitating an increase of noradrenaline, initiation of Empressin, and non-invasive ventilation. pH was 7.51, lactates 9.6 mmol/l, procalcitonin (PCT) 96 ng/ml.

By Day 3, further elevations in inflammatory markers (PCT 100 ng/ml, CRP 19 mg/dL) and troponin (22925 pg/mL) and high lactates (5.5 mmol/L) prompted the start of continuous venovenous hemofiltration with Cytosorb, with no anticoagulation, to address the inflammatory response. After 12 hours, the sorbent was changed, with improved hemodynamics and a decrease in vasoactive drugs requirements (NA 0.08 mcg/kg/min; stop Empressin).

On Day 5 the patient was awake, with valid diuresis and reduced noradrenaline (0.04 mcg/kg/min). Indicators of cytotoxicity were declining (PCT 2.5 ng/ml), although CRP remained high at 19.6 mg/dL, and urine cultures were positive for Escherichia coli and Enterobacter cloacae. Consequently, a third cycle of Cytosorb was initiated. However, it was interrupted due to clotting, leading to a fourth cycle being started.

By Day 6, the patient's condition improved, prompting the initiation of a final cycle of Cytosorb.

Following this treatment, her hemodynamics stabilized without the need for vasopressors, and inflammatory markers normalized (CRP 6.4 mg/dl), supporting her gradual recovery.

A clinical suspicion of zoonosis led to a molecular confirmation revealing Capnocytophaga canimorsus from blood cultures.

Conclusion

The timely diagnosis of septic shock and the therapeutic decision to start antibiotics, corticosteroids and Cytosorb from the onset resulted in a gradual resolution of the multi-organ failure.