

Ceftriaxone/dopamine/vancomycin

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Lack of efficacy: case report

A 34-year-old man exhibited lack of efficacy to dopamine while receiving treatment for hypotension and lack of efficacy to ceftriaxone and vancomycin while receiving treatment for *Streptococcus suis* infection and eventually died [not all routes stated; dosages not stated].

The man, who had obesity, admitted to the emergency unit due to very high fever and unconsciousness. He had a history of splenectomy due to a motorcycle accident before 10 years. He worked as a butcher in a local meat processing plant. A day before admission, he had injury to his hand by a pig bone. On arrival to the emergency room, he did not have neck stiffness or meningism, nor peripheral stigmata of infective endocarditis. Precordial examination showed no audible cardiac murmur. At home, he had high fever, chills, abdominal pain and watery diarrhoea. He was placed on extended basic life support and then on advanced life support due to circulatory and respiratory failure. Following intubation and administration of epinephrine, his spontaneous circulation returned. Considering the possibility of subarachnoid bleeding or pulmonary embolism, further examinations were conducted and he was transferred to the ICU. Cranial examination showed right-sided, multiple, acute ischaemic lesions. Apart from splenic rupture, he had a history of hypertension previously. On admission to the ICU, he had severe hypotension, sinus tachycardia and high fever despite IV dopamine use. Therefore, norepinephrine [noradrenaline] was given, and he was placed on invasive cardiovascular monitoring and hydration. Despite positive endexpiratory pressure, an adequate oxygenation could not be achieved. Blood gas analysis showed respiratory and metabolic acidosis. Also, further examinations showed severe hypoglycaemia and hypokalemia. Therefore, supportive therapy with ventilation, glucose and potassium substitutions were introduced. A high-dose vasopressor therapy was supplemented with epinephrine; however, only transient increase in blood pressure was achieved. Thereafter, her renal functions were found to be deteriorated and bleeding from each puncture site was observed. Simultaneously, skin petechiae and mucous membranes were observed throughout the body. Further examinations showed severe coagulopathy, thrombocytopenia and fibrinolysis, which resulted in alterations in haemostasis, and an unspecified therapy was started. samples were collected for infectious aetiologies. Subsequently, he was started on empiric antibiotic therapy with ceftriaxone and vancomycin; however, there was no improvement in his condition. Also, he still had unstable blood pressure, with no improvement in oxygenation and persistent acidosis. Further investigations revealed disseminated intravascular coagulation (DIC), acute renal and hepatic failures. Within 12h of admission, he died due to DIC, acute renal failure, and acute respiratory distress syndrome. After the death, blood cultures showed growth of *Streptococcus suis* and a past Epstein barr virus infection. Postmortem examination revealed features of DIC with microthrombosis in multiple organ capillaries. Also, multiple organ damage necrosis of parenchymal cells and congestion, exudate and hemorrhage of interstitial vessels of kidneys, lungs, and other organs were noted. The bacterial strain isolated from our patient was susceptible to all tested β -lactam antibiotics, vancomycin and to the other antimicrobial agents tested.

Agoston Z, et al. Fatal case of bacteremia caused by *Streptococcus suis* in a splenectomized man and a review of the European literature. Acta Microbiologica et Immunologica Hungarica 67: 148-155, No. 3, 21 Oct 2020. Available from: URL: <https://pubmed.ncbi.nlm.nih.gov/32223305/>

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