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RESEARCH ARTICLE

BILATERAL INFRAGENICULAR AMPUTATION IN AN INFANT WITH FULMINANT PURPURA CAUSED BY MENINGOCOCCEMIA

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ABSTRACT

The aim of this study is to warn about the evolution of meningococcal infection to sepsis and fulminant purpura which required the amputation of both legs. The case of a 2-year-11-month-old female infant is reported who was referred to the pediatrics emergency department of Hospital de Base in São José do Rio Preto, Brazil. The child was admitted to hospital without pulses in the lower extremities and changes in coagulation, thereby limiting any possibility of an surgical intervention involving the limbs. After four days of hospitalization, the distal cyanosis of the legs and feet progressed to necrosis. Bilateral infragenicular amputation was performed on the 26th day of hospitalization. The current case emphasizes the evolution of meningococcemia to bilateral infragenicular amputation. Despite all evolution in science over the last few decades, meningococcemia continues to result in high morbidity and mortality rates.

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INTRODUCTION

The pathogenesis of meningococcal infection involves several factors in a complex network of phenomena cased by Neisseria meningitidis. Infection may progress to sepsis and meningitis (GBD, 2016). In developed countries, around 10% of patients with meningococcemia die however in developing countries this figure can be as high as 50%. In Brazil, the mortality rate of patients with meningococcal disease is about 20% (Sharawat et al., 2018; Chiu et al., 1995). Nonetheless, there are few published data on the prevalence of amputations for meningococcal meningitis. The aim of this study is to warn about the evolution of meningococcal infection to sepsis and fulminant purpura which required the amputation of both legs.

Case report and Discussion: The case of a 2-year-11-month-old female infant is reported who was referred to the pediatrics emergency department of Hospital de Base in São José do Rio Preto, Brazil. The case report was approving in Ethical Committee of Medicine School of Sao Jose do Rio Preto#333/2009. The mother reported at admission that her child had had fever and vomiting for 20 hours with disseminated cutaneous lesions beginning to appear 12 hours after the onset of the symptoms.

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At physical examination, the weight of the infant was 11.575 kg and height 77 cm. The girl was in a bad health state, confused with signs of dehydration and pale skin and mucosa. Her arterial pressure was 108/62 mmHg and her heart rate was 100 beats per minute. She was suffering from acrocyanosis, delayed capillary filling time (more than 4 seconds), purpura and no palpable pulse in the lower extremities. The laboratory examinations showed: hemoglobin: 8 g/dL, hematocrit: 25%, leukocytes: 10,700/mm^3 (69% segmented), platelets: 34,000/mm^3, PCR: 13.72 mg/dL, creatinine: 1.2 mg/dL, potassium: 4.2 mEq/L and sodium: 136 mEq/L. A coagulogram showed INR: 3.1, TP: 31.2 seconds and TTPA: 70 seconds. The patient was provided clinical support and transferred to the pediatric ICU. The infant evolved to septic shock, electrolytic and acid-basic disorders, anasarca and hypoglycemia with the coagulation disorders persisting. Vasoactive drugs and antibiotics were prescribed and the patients received a transfusion of red blood cells. After four days of hospitalization, the distal cyanosis of the legs and feet progressed to necrosis. Bilateral infragenicular amputation was performed on the 26th day of hospitalization. The infant was discharged after 47 days in a good general state, with the amputation stumps healed. The patient was re-examined at 7 and 30 days when no signs of skin lesions or infections of the amputation stumps were noted. The current case emphasizes the evolution of meningococcemia to bilateral infragenicular amputation.

The pro-coagulant and pro-inflammatory states caused endovascular lesions, microvascular thrombosis, ischemia and multisystemic dysfunction (Faust *et al.,* 2001). The child was admitted to hospital without pulses in the lower extremities and changes in coagulation, thereby limiting any possibility of an surgical intervention involving the limbs. Despite of all the evolution in science over the last few decades, meningococcemia continues to result in high morbidity and mortality rates. The challenging aspect is that there is still no efficacious treatment for the coagulation disorder associated with meningococcal disease. Thus early treatment may reduce the morbidity and mortality and others causes of thrombophily must be envestigade (de Godoy *et al*., 2003).

REFERENCES

Chiu CH., Lin TY., Huang YC. 1995. Cranial nerve palsies and cerebral infarction in a young infant with meningococcal meningitis. *Scand J Infect Dis.,* 27(1):75-6.

de Godoy JM., Braile DM. 2003. Protein S deficiency in repetitive superficial thrombophlebitis. de Godoy JM, Braile DM. *Clin Appl Thromb Hemost*. Jan;9(1):61-2.

Faust SN., Levin M., Harrison OB., et al. 2001. Dysfunction of endothelial protein C activation in severe meningococcal sepsis. *N Engl J Med.,* 345:408-416.

GBD 2016 Meningitis Collaborators. Global, regional, and national burden of meningitis, 1990-2016: a systematic analysis for the Global Burden of Disease Study 2016. Lancet Neurol. 2018 Dec;17(12):1061-1082. doi: 10.1016/S1474-4422(18)30387-9. Epub 2018 Nov 13.

Sharawat IK., Subramani V., Kesavan S., Saini L. 2018. Rare vascular complication of acute meningococcal meningitis in a child. *BMJ Case Rep.*, 2018 Oct 28;2018. pii: bcr-2018-227069. doi: 10.1136/bcr-227069.

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