Short Report

Fatal extradural haematoma after snake bite (Bothrops moojeni)

Joao Aris Kouyoumdjian†, Cristina Polizelli, Suzana Margarete A. Lobo and Sergio Musso Guimares Department of Medicine, Faculdade de Medicina de São José do Rio Preto, São Paulo, Brazil

On 1 October 1989 a 13 years old boy was bitten on his left ankle by a snake—Bothrops moojeni, 71 cm long—in the garden of his farmhouse at 2000 h. A few minutes later, he developed local pain and swelling and a tourniquet was placed above the bite region. In the second hour after the accident, he was admitted to a small village hospital nearby and intravenous antivenom therapy was administered: 5 ampoules of Soro Anti-Bothropico from Instituto Butantan. About 3 h after the antivenom therapy, he became confused and started presenting attacks of generalized rigidity that afterwards progressed to obvious decerebrate rigidity. Nine hours after the snake bite the boy was transferred to the University Hospital. His blood pressure was 120×80 mm Hg, temperature 35.5°C and pulse 60/min. He had a swelling at the site of the bite, but there was no necrosis or impairment of perfusion (normal pedal and tibial arterial pulse and absence of cyanosis). There was no apparent evidence of spontaneous bleeding (gastrointestinal, urinary, ungual, gums or subcutaneous). Renal function was normal: no oliguria, blood urea 39 mg %, blood creatinin 0.7 mg %, serum potassium 3.5 mEq/litre and serum sodium 140±0 mEq/litre. The level of consciousness was however altered, with the onset of stupor. At this stage the boy also exhibited anisocoria, the right pupil being larger than the left. Additional intravenous antivenom was administered. The coagulation time was normal on admission to the University Hospital. Two hours later, in the intensive care unit, anisocoria was still present. The patient became comatose and slipped into respiratory paralysis and bilateral mydriasis. By now the coagulation time was prolonged. A computed tomography scan revealed an extensive right frontal extradural haematoma. A neurosurgical approach was contra-indicated owing to the irresponsible apnoeic coma. The coagulation time became persistently normal 24 h after envenomation but the boy died on 5 October 1989.

B. moojeni (Viperidae) envenomation causes (i) local swelling in all cases (100%) followed by complications such as necrosis (8%), abscess (10%) and compartment syndromes (4%); (ii) abnormality of blood coagulation in 75% of cases because of the depletion of fibrinogen; (iii) systemic haemorrhage in 6% only, which is usually mild in spite of the high incidence of blood coagulation abnormalities; and (iv) renal failure, direct or indirect, in 6% of cases (KOUYOUMDJIAN & POLIZELLI, 1988).

The occurrence of intracranial haemorrhage after snake bite has been described in a few sporadic cases all over the world. Teixeira (cited by ROSENFIELD, 1943) described a haemorrhagic focus destroying brain tissue, and BARROS & JANUARIO (1986) described a subarachnoid haemorrhage in a 21 years old patient, after Bothrops venenomation. WARRELL et al. (1977) described 3 cases of subarachnoid haemorrhage following the bite of Echis carinatus: 2 were fatal and the other also suffered intracerebral haemorrhage. Pituitary haemorrhage has also been described after bites by B. jararacussu (WOLFF, 1958) and Vipera russelli (TUN-PE et al., 1987), followed by acute or chronic pituitary failure.

In our case neurological signs developed 5 h after the bite (3 h after antivenom therapy). The coagulation time was normal 7 h after the administration of antivenom but became prolonged 2 h later. By this time the clinical picture was an apnoeic coma. We believe that the extradural haematoma occurred first because of haemorrhagin-induced damage to the endothelial cells of small blood vessels, complicated further by blood incoagulability.

References


Received 4 December 1990; revised 12 March 1991; accepted for publication 13 March 1991.

[Address for correspondence: Avenida Bady Bassitt 3896, 15.015 São José do Rio Preto, SP, Brazil.]

[Address for correspondence: Avenida Bady Bassitt 3896, 15.015 São José do Rio Preto, SP, Brazil.]

[Address for correspondence: Avenida Bady Bassitt 3896, 15.015 São José do Rio Preto, SP, Brazil.]