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Internal Medicine

A RARE CASE OF INTRA CRANIAL HAEMORRHAGES IN SNAKE BITE ENVENOMATION

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ABSTRACT Snake bite envenomation is a common medical emergency in tropical countries like India . The common manifestations are neuroparalysis and coagulopathy . But life threatening intra cranial bleeding is rare. The commonest coagulopathy is venom induced consumptive coagulopathy (VICC) and results from envenomation by viperid snakes and elapids such as Australian elapids and few colubrid snakes.

KEYWORDS :

INTRODUCTION

Snake bite envenomation is a common medical emergency in tropical countries like India . The common manifestations are neuroparalysis and coagulopathy . But life threatening intra cranial bleeding is rare. The commonest coagulopathy is venom induced consumptive coagulopathy (VICC) and results from envenomation by viperid snakes and elapids such as Australian elapids and few colubrid snakes. Many pateints with venom induced coagulopathy will exhibit minimal bleeding manifestations such a bledding from bite site or cannula. More severe bleeding such as intra cranial bleeding is rare and fatal.

MATERIALS AND METHODS

We report the rare case of intra cranial haemorrhages in snake bite envenomation

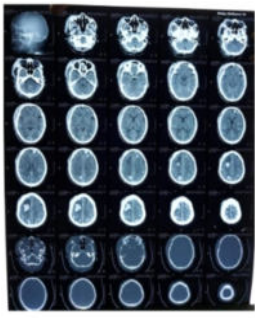
RESULTS

CASE STUDY

A 76-year-old male with the history of snake bite followed by sudden onset altered sensorium leading to fall and no improvement in sensorium. On neurological examination revealed GCS of E1V1M1 and bilateral non reacting dilated pupils. The CT-brain and 3D face showed multiple intracerebral haematomas and bilateral subarachnoid haemorrhage and right frontoparietal subgaleal haematoma. The 20 minute whole blood clotting test was abnormal and PT, INR ,a PTT,D-DIMERS are elevated and thrombocytopenia was observed and a diagnosis of snake bite envenomation with venom induced consumptive coagulopathy with intracranial haemorrhage was made.

Plain CT-brain of patient showing multiple intracerebral haematomas and bilateral subarachnoid haemorrhge and right frontoparietal subgaleal haematoma.

CT Scan:



DISCUSSION AND CONCLUSION

Snake bites are common and may lead to neurological manifestations and coagulopathy.The common neurological manifestations are ptosis, opthalmoplegia , limb weakness , respiratory failure. The common manifestations of coagulopathy are bleeding from the bite site or IV cannula.But life threatening intracranial bleeding and brain infarcts are rare. The proposed mechanism for coagulopathy is termed as venom induced consumptive coagulopathy.Various terms have been used to refer to the consumption coagulopathy following snake envenoming including disseminated intravascular coagulation (DIC) , defibrination sysndrome, and procoagulant coagulopathy . More commonly this term is used because it provides a more general description of coagulopathy . VICC can occur in envenoming by viperid snakes ,certain elapids, including Australian elapids and a few colubrid (rear fang) snakes. VICC results from the activation of the clotting pathway by procoagulant toxins in the venom .The snake venom components that act on the coagulation system are classified according to the part of the coagulation pathway where they act and include factor V activators,factor X activators, prothrombin inhibitors,thrombin like enzymes , fibrogenases.Almost all of these toxins cause activation of one or more clotting factors and lead to low or undetectable concentrations of fibrinogenfollowing envenoming. Thrombin-like enzymes or fibrinogenases generally cleave either the alpha chain or the beta chain of fibrinogen to give fibrinopeptide A or B , which results in the consumption of fibrinogen without forming fibrin. Therefore these toxin donot strictly activate the entire clotting pathway , but result in low or undectable fibrinogen concentration, often with normal levels of other clotting factors. In contrast, toxins that act higher up the clotting pathway, such as factor X activator or prothrombin activators, result in multiple factors defeciencies such as those occurring with Australian elapids, Rusell's viper, Echis spp. The standard treatment for this rare compilation is ASV and Fresh frozen plasma can be given for correction of coagulopathy and decompression craniotomy can be considered in the presence of raised intracranial pressure and poor sensorium

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