

Centipede Bite or Intravenous Hydrocortisone Injection Complicated With Acute Dystonic Reaction-Case Study and Review

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Case Report

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Abstract: There are numerous kinds of centipedes present across the world. All species hold venom in their glands. However, a bite of each kind has its reactions. According to researchers, it has not been that bites of centipede killed people or pets. The symptoms of centipede stings vary depending on the degree of allergic reaction and the size of the centipede. Classically, bite victims have severe pain, swelling and redness at the site of the bite, with symptoms usually lasting less than 48 hours. Symptoms for those more sensitive to the venom's effects may also include a headache, chest pain, heart tremors, nausea and vomiting. We are going to report and discuss a case of centipede bite or first dose of intravenous hydrocortisone complicated with a rare presentation of dystonic reaction.

Keywords: Centipede, dystonic reaction and centipede bite.

INTRODUCTION

Roughly 3500 species of centipedes are found in the class chilopoda, phylum arthropoda. It is elongated multi-segmented arthropods with a single pair of legs on each body segment. Centipede bites were reported worldwide, mostly in the tropical and subtropical regions. Centipede envenomation can cause a spectrum of clinical features ranges from local reaction to systemic reaction. This seemingly small creature but can be fatal. Double fang marks are the signs of a centipede bite. Patients who meet centipede envenomation commonly experience localized pain, localized pruritus, headache, nausea, vomiting, anxiety, palpitation and erythema. It also showed some rare complications such as skin necrosis, lymph node swelling, rhabdomyolysis, acute renal failure, myocardial infarction and anaphylaxis [1-3].

In this report, we described a case of centipede bite causing a very rare presentation of dystonic reaction. Dystonic reactions are characterized by intermittent spasmodic or sustained involuntary contractions of muscles in the face, neck, trunk, pelvis, extremities and larynx. These reversible extra-pyramidal symptoms may begin immediately or can be delayed hours to days [4] following antipsychotic medication, antiemetic such as domperidone and some antiepileptics. Although dystonic reactions are rarely life threatening, the adverse effects often cause distress for patients and families [5].

CASE REPORT

A 15-year-old girl admitted with acute swelling of her right shoulder following centipede sting. She complained of local irritation and itching. On examination, there was an obvious swelling of her right shoulder. Immediately she was admitted to the local hospital in Sri Lanka where she was received intravenous hydrocortisone injection. However, shortly after hydrocortisone injection, she developed slow and sustained contractions of facial and neck muscles groups. She also showed oculogyric crisis (upward and

outward turning of the eyes). Because of these abnormal movements, she was transferred to Teaching Hospital Batticaloa. On admission, we gave her intravenous benzhexol and chlorpheniramine. Her dystonic reaction was disappeared following injection but recurred four times within six hours period, each time she needed intravenous benzhexol injection. Her blood reports were normal including full blood count, serum electrolytes, serum calcium and renal function. Throughout the hospital stay, she was haemodynamically stable. Following day she was discharged from the hospital.

DISCUSSION

Centipedes sting can cause extreme pain, edema, erythema and other localized pruritus, headache, nausea and vomiting symptoms as well as anxiety and panic. Rarely some people developed anaphylaxis, necrosis, rhabdomyolysis [6] and lymph node swelling. This young lady developed localized swelling and pruritus. After received intravenous hydrocortisone she developed a dystonic reaction. A patient who meets centipede envenomation not developed acute dystonic reactions in the available literature. At the same time, this reaction is not a feature of a single dose of

intravenous hydrocortisone. Centipede venoms have not been studied as extensively as many spider and scorpion venoms. However, they do contain a wide range of components, including 5-hydroxytryptamine, histamine, metalloproteases, hyaluronidase, pore-forming toxins and iron channel modulators [7].

Acute dystonic reactions are characterized by involuntary sluggish and constant contraction of muscle groups which may result in twisting, repetitive movements and abnormal posturing. It occurs after few hours to few days of commencing neuroleptic and anticonvulsant medication. It usually presents as an oculogyric crisis. The most commonly affected muscle groups are head and neck. Involvement of the laryngeal and pharyngeal muscles may lead to respiratory distress, asphyxia and choking [8]. This patient developed acute dystonic reactions, 30min after centipede bite. However, the patient received intravenous hydrocortisone within this period. We are confused that this dystonic reaction could it be a rare presentation of intravenous hydrocortisone? This is very challenging because of the high possibility of misdiagnosis. This acute dystonic reaction may mask the following conditions such as hyperventilation syndrome, labyrinthitis, hypocalcaemia, partial seizures and allergy with swollen tongue [8, 9].

Steroid causes number of rare presentations such as feeling depressed, anxious, irritable, cognitive impairment, seizure and psychosis. However, none of these literatures not reported as acute dystonic reactions [10]. Management should be supportive with wound care and control of pain and inflammation being the mainstay of treatment. Initial heating and later ice application is again suggested. Prophylactic antibiotics are generally unnecessary, however, if evidence of secondary infection is present, the wound should be cultured and a course of antibiotics which cover gram positive organisms should be initiated.

CONCLUSION

Centipede bites are reported worldwide, mostly in tropical and subtropical regions. Centipede envenomation can cause different types of local and systemic reactions and can affect all age groups. In a remote setting where resources are limited, importance should be placed on identification of the source of the bite and recognition of common symptoms of centipede bites to distinguish them from more serious and

potentially fatal arthropod bites. Acute dystonic reactions are very rare complications, which may result of centipede bite or intravenous hydrocortisone. Treatment is primarily supportive in both the resource constrained and hospital settings and therapy are directed at reducing pain, swelling and anxiety. Victims of centipede bites should be monitored for four hours for development of symptoms of these complications and all should receive a tetanus vaccination.

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