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Case Report

Acute pancreatitis following multiple wasps stung

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Abstract: Wasp stings are not uncommon worldwide. In developed countries people are affected by one or few stings. Commonly cause self-limiting local reaction. Infrequently more serious systemic reactions such as anaphylaxis, rhabdomyolysis, and intravascular haemolysis may occur, especially with multiple stings. Wasps stung complicated with multiple organ damage is frequently reported, but complicated with pancreatitis is very rare complication as well as it is a life threatening phenomenon.
Keywords: Wasp sting, Pancreatitis and multiple organ damage

INTRODUCTION

Hymenopterans are insects broadly categorised into three families; Apidae (honeybees, bumblebees), Vespidae (hornets, wasps, and yellow jackets) and Formicidae [1].

Wasps are carnivorous insects that build different kinds of nest and are known as debara in Sinhala. Technically speaking, the hornet is a larger species of wasp. Giant Honey bees prefer to nest in exposed areas, usually on tree limbs or under cliff overhangs, and sometimes on buildings.

Hymenoptera stung causes spectrum of clinical features from local to systemic manifestation including serum sickness, acute renal failure, haemolysis, thrombotic thrombocytopenic purpura (TTP), disseminated intravascular coagulation (DIC), myocardial infarction or cardiac arrhythmias, acute kidney injuries, neurological complications such as myasthenia gravis, cerebral infarct and seizure[2,3].

We reported the case of a patient who has been stung by multiple wasps and developed anaphylactic shock [1], acute kidney injuries, acute liver injuries [4] and had a very rare complication of acute pancreatitis.

CASE REPORT

A 55-year-old farmer was stung by multiple wasps while working in his farm land. He rapidly developed breathing difficulty and multiple erythematous rashes on his all over the body.

At arrival in the emergency department, he was conscious and oriented. He was painful with multiple erythematous swellings predominantly over his trunk, upper limbs, and head. He felt nauseous, giddiness and headache. The next day we noticed that he developed decrease urine output and progressive shortness of breath. His heart rate was around 100 beats/min and tachypnea (22 times/min). Oxygen saturation was 90% on room air, and blood pressure was recorded as 100/90 mm of Hg in the right upper limb. Body temperature was 36.8C. In the initial laboratory investigations, revealed that neutrophil leucocytosis, serum creatine phosphokinase (CPK) - 1104U/L (26– 308U/L),blood urea- 78mg/dL, serum creatinine- 3.4mg/dL serum potassium- 5.1mmol/l, serum bilirubin-2.2mg/dl,ALT-35iu/l,AST-40iu/l,INR-1.2,APTT-30s and serum calcium- 7mg/dl. The urine was dark in colour after the patient was catheterized. On urine analysis confirmed the presence of myoglobin.His blood pressure started to drop and we started noradrenalin infusion.

Initial diagnosis was made as anaphylactic shock, rhabdomyolysis and acute kidney injury. His renal function gets worse and he undergone dialysis several time while he was in the department. His liver function also gets affected. Forth day of his admission he developed abdominal pain. An erect abdominal X-ray was taken it was normal. His serum amylase level raised to 1100IU/l (28-85).This raised amylase level come back to normal eight day after admission. After intensive treatment, his liver function and renal function were recovered within 10 days.

DISCUSSION

Wasps stung causing various rare complications such as acute kidney injuries, liver injuries anaphylactic shock, cardiac problems,

coagulopathy and neurological complications were reported around the world. In Srilanka, commonly three type of wasps causing casualties, most of the time people developed local reaction and only 4.6% developed anaphylactic shock[5]. Most of the time multiple organ failure due to venom rather than an anaphylactic reaction[6].

This case highlighted a man, without any previous medical problems following multiple wasps attack developed anaphylactic shock then he developed acute kidney injury, acute lung injuries, hepatitis and evidence of pancreatitis. Initially we maintained his blood pressure with noradrenalin for couple of days. Wasps instilled nearly tiny amount of venom to our body which contains amines and kinins .These substances are responsible for the painful erythematous swelling and anaphylactic shock [1].

This victim complained of severe body pain from the day of admission. He felt that his body swollen and also passed dark colour urine, this alert us that this patient developed rhabdomyolysis. This caused by mass envenoming due to multiple wasps stung, early diagnosis and immediate hydration will salvage the kidney function[7].We have started intravenous infusion according to his body weight. This patient developed both hypocalcaemia and hyperkalemia; these are the early complication of rhabdomyolysis. Developed acute renal failure is more serious complication of the rhabdomyolysis and is associated with high mortality[8,9]. However, we have to consider acute interstitial nephritis as a cause for this acute renal failure. In that case we need to be go for the renal biopsy[10].

This patient was previously unevaluated and he denied alcohol ingestion. Second day of the admission we noticed that yellow discolouration of his sclera. It could be due to anoxic hepatitis or wasp venom induced hepatitis which is one of the rare complications or disseminated intravascular coagulation [DIC]. In the case of anoxic hepatitis liver enzymes shoot up more than 1000 iu/l [11]. In my patient's liver enzymes and clotting profile were normal.

Wasp stung with complication of pancreatitis is a one of the rare presentation. I have seen only couple of reported cases in the journals[11].This patient complained of severe abdominal pain and vomiting. He has been given analgesia but pain not settles. This abdominal pain was persisted for 48hours. Blood was taken for Serum amylase, which was more than 1000u/l. Diagnosis of acute pancreatitis was made.

CONCLUSION

Multiple wasps stung with multiple organ failure have been reported several times, but complicated with acute pancreatitis is a one of the rare complication. A study revealed that intermittent hemodialysis (IHD) with high-volume hemofiltration (HVHF) for treating acute wasp stings complicated by multiple organ damage, significantly lower myoglobin, creatine kinase-MB, lactate dehydrogenase, bilirubin and creatinine levels than patients treated with IHD alone [12].

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