Bilateral Ptosis Following Wasp Sting

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Abstract

We report a case of bilateral ptosis due to wasp sting which was completely treatable.

INTRODUCTION

Wasps are very commonly found both in villages and towns. Their nests are found in cracks and crevices of walls, woods and soil. They are also found near sugary substances, decaying meat and around garbage. Hence, the risk of being stung is very high in rural as well as urban population. They attack human being usually when their nests are disturbed. The Hymenoptera is an order of insects that includes apids (bees and bumblebees), vespids (wasps, hornet and yellow jackets) and ants. Their venoms contain a wide array of amines, peptides and enzymes that are responsible for local and systemic reactions.

Clinical features of envenomation are mainly local but systemic manifestations also occur which are mainly due to anaphylactic reaction. Allergic neuritis, serum sickness and allergic encephalitis are also well reported.1 Neurotoxicity of wasps venom is also well known.1,3

The unique manifestation in this case was bilateral ptosis that persisted for 10 days and a complete recovery was seen after 10 days of treatment. We failed to get any reference of ptosis (unilateral or bilateral) developing after wasp sting as confirmed by medline report. Therefore we find it befitting to report this case.

CASE REPORT

A 35 years female, suffered wasp sting on her right temple at 3 am on 5th July 2002. There was a wasp nest in the nearby wall and accidently in sleep, her attendant felt that she might have disturbed the nest. She started having pain and swelling at the site of sting. After 30 minutes, she developed tightening and itching whole body, pain abdomen, frothing from mouth and soon, she was unable to speak, swallow and see.

On being referred by a local doctor, she reported to medical emergency at Patna Medical College and Hospital at 11.30 pm on 5.7.2002 after a lapse of 21 hours physical examination revealed local swelling that extended to the right side of face and neck, pulse was 100/min, BP was 120/80 mm of Hg and cyanosis, clubbing, pedal edema and jaundice were absent. Respiratory system, cardiovascular system and abdomen revealed no detectable clinical abnormality. Examination of central nervous system showed bilateral ptosis (Fig. 1a) and nasal tone of voice, otherwise this system was also clinically normal with no other focal neurological signs.

Patient was treated by intravenous antibiotic, analgesic and IV fluids. In addition intravenous neostigmine was given in the dose of 1 amp IV every 30 minutes to combat the ptosis. To counter the nicotinic effect of neostigmine, atropine was given (1 amp for every 4 amps of neostigmine). Local and systemic manifestations including neuroparalytic manifestation (nasal tone of voice, inability to see and inability to swallow) disappeared after 24-36 hours. A very gradual recovery was noted in ptosis that completely disappeared on 15.7.2002, (Fig. 1b) patient was discharged asymptomatic on 16.7.2002.

DISCUSSION

Vespids venom in gland at posterior end of abdomen is expelled rapidly by contraction of muscles of venom sac. Venom contains toxins and enzymes. Toxins include serotonin, histamine, acetylecholine and several kinins in which kinins are neurotoxins.1-3 Enzymes include hyaluronidases and phospholipase A and B. Phapholipases are among major venom allergens.2

Neurotoxicity of wasp venom is also well reported that kinins is neurotoxic components of wasp and ant venoms causing presynaptic block of cholinergic transmission by means of...
irreversible depletion, probably caused by non-competitive inhibition of choline uptake.

In this case both local and systemic manifestations were observed. Inability of swallowing, seeing and speaking and later on nasal tone of voice were obviously neuroparalytic manifestations affecting cranial nerves that all subsided within 24-36 hours of neostigmine and atropine treatment. Bilateral ptosis was unique neuroparalytic manifestation that persisted for 10 days after the sting. Textbooks of medicine, forensic medicine and zoology were consulted and a search on internet of literature of last 30 years through Medline-Search was made, but no reference of ptosis developing after wasp sting was found.

Further, a gradual, but complete recovery was seen after 10 days treatment with intravenous neostigmine and atropine. This observation may be of great value in medicine because ptosis due to wasp sting was seen for the first time as per the result of Medline-Search and it was completely treatable in this case. The other neuroparalytic manifestations that subsided within 24-36 hours were also due to the effect of intravenous neostigmine and atropine which was instituted right at the time of admission.

In this case the observation of ptosis and other neuroparalytic manifestation seem to be due to explanation given by AU Piek T in which they have observed that the possible explanation of neuroparalytic features is neuromuscular junctional block. The response by neostigmine and atropine further confirms this.

Our first experience of observing and treating bilateral ptosis due to wasp sting appears to be a rarity in the medical literature. Hence, we are reporting this case to share our experience in observing and treating neuroparalytic manifestations of wasp sting.

REFERENCES
3. AU Piek T, T, neurotoxic kinins from wasp and ant venoms. SO Toxicon 1991;29:139-49.