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Spider bite, a case from Eastern India with review of literature

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Abstract

Spider species those are important for causing health related hazards, are different from continent to continent and even from country to country. Loxosceles species and Latrodectus species bites are common in South and North America are as Latrodectus species and Latrodectus hasselti bites are common in Africa and Australia respectively. In India spider bite, though common in clinical practice, but still inadequately reported. Though a large number of spider bites seemas harmless, our experience in clinical practice differs in most of the cases. Lack of large studies and few case reports from this part of the world, results in inadequate experience in dealing symptomatic bites. Here we report a middle aged housewife from the eastern part of India who comes to us with gradually progressive local inflammation after a spider bite. Her local inflammation rapidly spread in spite of conservative managements with NSAIDS, local agents, and steroids and only responds on adding Dapsone to the regimen. We confirm the spider as a species of Tarantula of genera chilobrachys with the help of Zoology department and share our experience as a successful treatment of rare an envenomation.

Keywords: Spider bite, Tarantula, India

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1. Introduction

Though insects bite is a common phenomenon in rural India but still spider bite is less commonly reported. The outcome of spider bite varies in severity with different species. It may be just local inflammation to severe form of neurological or cardiac involvement. Several times there are needs of specific antivenom to cope up with fatal cases. It is a well known burden to health care provider in India but surprisingly less reported and emphasized. Many a times these cases are treated symptomatically (even in case of severe envenomation) due to lack of availability of antivenom in India.

Here we are highlighting a case of spider bite with severe form of inflammation who came from rural part of India. She has been treated with anti-inflammatory drugs but response was seen only with Dapson. Taxonomy of the spider confirmed it as Tarantula, which has been rarely cited as a cause of morbid envenomation from this part of world.

2. Case Report

Our case is a 48 years female of rural West Bengal, India. She came to the emergency room with history of severe pain in the left hand which started for last three hours after bite of a spider (Figure 1 and Figure 2). There was rapidly progressing inflammatory change from index finger (the site of spider bite) towards axial and mostly involved the medial aspect of the arm.

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Figure 1. Sever inflammation of upper arm with induration spreading distally.



Figure 2. Bite mark on the tip of the finger.

In the emergency room her BP recorded 130/80 mmHg. Heart rate and respiratory rate were 106/min and 29/min respectively. She was febrile with a temperature of 102^{O}F. PUSLE OXYMETER showed a saturation of 98% in room air. ECG showed sinus tachycardia without any other abnormality. There was no sign of severe hypersensitive reaction. No history of shortness of breath or loss of consciousness. Neurological and other systemic examination was normal.

After local dressing, we put her on NSAIDS and performed some routinetests. There was no improvement of her symptoms after 48 hours, so we started Prednisolone per orally as a dose of 1 mg/ kg body weight. She had an upper normal level of Total count with neutrophilic preponderance (TC- 9800/cc, N90 L8 E2 M0 B0). ESR was 55 mm in first hour and CRP was 29. Her fasting blood sugar was 89 mg/dl.

There was little improvement of her symptoms with prednisolone administration. On fourth day, we switched over to Dapson. Fifth day on wards there was improvement of pain and inflammation. We discharge her on 8th day (Figure 3). By that time her inflammation and pain were almost subsided.



Figure 3. Response after treatment with Dapsone. Inflammation largely subsided.

3. Discussion

Spider bite is a well known entity in North and South America, Africa and Australian countries. Fiddle back spider[1] (Loxosceles species) and Black widow spiders[2] (Latrodectus spp) bites are common in South and North America respectively, on the other hand Button spiders (*Latrodectus spp*) and Red backs spider (*Latrodectus hasselti*) bites are common in Africa and Australia respectively[3,4]. Initial management is local wound dressing in most of the cases and the the use of NSAIDS as needed[5]. Use of steroids and Dapson have variable out come[5]. Need of specific antivenin is only indicated for severe cases[5]. For example, Venom of widow spider is neurotoxic[5] and many a time specific antivenin is needed. So identification of specific spider species is a very important in case of severe form of envenomation. Among the Asian countries, spider bite has been seldomly recognized. There is only few case reports from Asian continent and a good numbers are from Thailand. Tarantula (*Lycosa tarantula*,) bite was the commonest form spider bite in those cases[6,7]. Spider bite cases have rarely been reported from India. A recent report from South India documented a case of Tarantula bite causing local inflammation which improved with use of NSAIDS[8]. Tarantula bite though usually not very severe, but can cause pain and swelling in the affected areas and even contact with its body hairs can leads to severe inflammations[5]. Our case is a severe form of spider bite. There were rapidly progressing inflammatory changes in the affected limbs. Use of systemic analgesics and steroids gave little improvement in her symptoms. Dramatic improvement was noticed with use of Dapson. As the patient party brought that spider in a container, we sent it to our nearest Zoology Department to confirm the Species so that we could mold our treatment accordingly. That Zoology department has confirmed it as Tarantula (Figure 4).



Figure 4. Dead Spider identified as Tarantula.

The prevalence of spider bite has never been documented in India, though in our day to day practice we manage this type of cases often It is a much over looked toxicological phenomenon with an immense of importance from medical point of view in our country.

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