



A Rare Case Of Facial Cutaneous Abscess Caused By Honeybee Sting.

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Abstract

Background: Arthropod bites that are capable of inflicting injury, inciting allergic reactions, and transmitting systemic disease are known worldwide. Hymenopteran venoms contain a mixture of proteins, peptides, and small organic molecules that produce varied effects.

Aim: To know and consider the treatment plan for a chronic abscess from a bee sting.

Materials and methods: A 36 years old healthy male with a history of bee sting from past 20 days. Incision and drainage was performed and with antibiotics, regular dressings were done.

Results: Satisfactory wound healing noted after 15 days of regular follow-up.

Conclusion: The right approach for incision and drainage followed by regular wound debridement and dressings with proper antibiotic cover helped in healing of the cutaneous abscess.

Keywords: Bee sting injury, Cutaneous abscess, Facial infected wounds, Incision and drainage

Introduction

The Hymenoptera order (Greek Hymen: membrane; Ptera: alas) includes insects from the families of Vespidae (hornets, wasps and yellow jackets), Apidae (bees) and Formicidae (fire ants). These animals have a stinging apparatus at the tail end of their abdominal segment and are capable of delivering between 100 ng (fire ants) and 50 ng (bees and vespids) of venom¹. As a result, hymenoptera stings are very common and they usually heal without any complications following minimal treatment².

Insect stings can usually result in 1 of 4 outcomes: 1. The most usual one is a local reaction with pain and pruritic urticarial lesion less than 5 cm in diameter; 2. A large local reaction more than 5 cm in diameter lasting more than 24 h; 3. A mild systemic reaction consisting of urticaria, erythema, nausea or diarrhea; and 4. A severe systemic reaction including laryngeal edema, bronchospasm and hypotension³.

More serious systemic reactions occur in 0.4-0.8% of children and 3% of adults⁴. Adrenaline, steroids and antihistamines are the cornerstones to counteract the allergic effects of hymenoptera venom⁵.

Case Report:

A 36 years old healthy male patient came with a chief complaint of swelling over the right side gonial angle region on the face since 1 week. The history of presenting illness revealed that patient had a bee sting in a local forest in Karnataka, India 20 days ago. Following which patient had slight pain over the right side of face with mild redness and itching sensation for 3 days.

After 4th day patient had increased itching sensation with slight swelling noted measuring approx 1cm. Within a week the swelling increased upto a size of 3cm with associated pain. By the time the patient visited our centre for evaluation it was 20 days since the bee sting with the swelling approx measuring 5x5

cms over the right side of gonial angle with redness of skin and a sinus tract opening. No relevant past medical history. No family and medical history of Tuberculosis.

On examination, under palpation of the lesion, it was noted to be soft and fluctuant with mild local rise in temperature with indurated margins. Intra oral examination reveals no relevant odontogenic findings. On milking the lesion, purulent discharge was noted from the sinus tract opening with a pungent odor. After taking a written informed consent from both patient and the attenders, incision and drainage was performed from the most dependable region using a no.11 blade by Hiltons method. The sinus forceps was used to widen the cavity space for better drainage. Around 5cc of the fluid was collected and sent for culture sensitivity test. Patient was prescribed with Amoxicillin 500MG with Clavulanic acid 125mg twice a day and Metronidazole 400MG thrice a day for empirical

management till arrival of CST report. Later continued as a definitive therapy as the report showed organism isolated was *Streptococcus pyogenes* which was sensitive to penicillin group of drugs. Along with aceclofenac 100mg as analgesic.

The necrotic tissue was removed and proper irrigation was done with betadine and saline. A rubber glove drain was secured to the wound margin using 3-0 silk and the wound was closed using a sterile bandage. Patient was recalled the following day for evaluation of dressing soakage. After 48 hours of debridement the glove drain was removed and irrigated with betadine and saline.

Following which regular dressings were done on daily basis for the next 5 days with sterile gauze pads over mupicorin ointment for secondary healing of the wound. From 9th day post operative we started with open dressing with only application of mupirocin ointment over the wound. By the 15th day post operative, the patient wound had satisfactory healing.

Figure 1: Day 01



Figure 2: Glove drain placement



Figure 3: Day 7 post operative



Figure 4: Day 15 post operative



Discussion:

Anne K. Ellis and James H. Day in the Current Opinion in Allergy and Clinical Immunology journal in the year 2005 stated most insect stings cause transient localized reactions, requiring only symptomatic treatment. These reactions are not IgE mediated and future allergic reactions are unlikely. The material in the vesicle is necrotic, and it should be left intact to prevent secondary infection.⁶

Graham O Solley stated in the Ann Allergy Asthma Immunol. 2004 Dec that, the spectrum of clinical symptoms and signs is similar to that seen in anaphylaxis from other sources; stings on the head or neck are not more likely to cause life-threatening reactions than stings elsewhere on the body; a lesser reaction will not necessarily lead to a more serious reaction from a future sting; and patients who have had anaphylaxis from other sources are at no greater risk than that of the general population of reacting similarly to insect stings or bites⁷.

T.M Freeman in the journal of N Engl J Med 2004 wrote, occasionally, persons will have swelling from a hymenoptera sting that may involve a large area and persist for up to a week. Although it may be difficult in some cases to distinguish a secondary infection from a large local reaction, in the latter event the swelling usually peaks within 48 hours, whereas progression of swelling for more than two days, accompanied by fever or lymphadenitis, suggests secondary infection. The reactions that lead to anaphylaxis, however, are of more concern than secondary infections⁸.

Conclusion:

The method involved to explore and release the abscess was found to be effective with proper

antibiotic cover and with regular dressings and follow-up. A Secondly infected insect bite should be well addressed for better outcome and to prevent further complications.

References:

1. Ramón Manuel Alemán Navas et al. Floor of the Nose Mucosa Lysis and Labial Abscess Caused by a Bee Sting. Braz Dent J (2009) 20(3): 249-253.
2. Kocer U, Ozer TY, Mete AH, Karaaslan O. Skin and soft tissue necrosis following hymenoptera sting. J Cutan Med Surg 2003;7:133-135.
3. Tome R, Somri M, Teszler CB, Fradis M, Gaitini LA. Bee stings Of children: when to perform endotracheal intubation?. Am J Otolaryngology 2005;26:272-274.
4. Moffitt JE, Golden DB, Reisman RE, Lee R, Nicklas R, Freeman T, et al.. Stinging insect hypersensitivity: a practice parameter Update. J Allergy Clin Immunol 2004;114:869-886.
5. Junghanss T, Bodio M. Medically important venomous animals: Biology, prevention, first aid, and clinical management. Clin Infect Dis 2006;43:1309-1317.
6. Ellis AK, Day JH. Clinical reactivity to insect stings. Curr Opin Allergy Clin Immunol 2005;5:349-354.
7. Graham O Solley. Stinging and biting insect allergy: an Australian experience. Ann Allergy Asthma Immunol. 2004 Dec.
8. T.M Freeman. Hypersensitivity to Hymenoptera Stings N Engl J Med 2004;351:1978-84.