CASE REPORT

Wells’ syndrome is a rare disease of unknown etiology. This syndrome was described initially by Wells in 1971 as a recurrent granulomatous dermatitis with eosinophilia, and it was later renamed as eosinophilic cellulitis. This cellulitis is difficult to differentiate from the bacterial form and might be treated at first visit with antibiotics, without response. A combination of bacteria can decrease the suspicion of the disease. Diagnosis of Wells’ syndrome is made by the clinical appearance, course and characteristic histopathological findings. The relationship between arthropod and eosinophilic cellulitis is not very clear.

We report the case of a patient stung by a honeybee, which resulted in cellulitis. Histology revealed prominent diffuse infiltration of eosinophils into the subcutaneous fat. Wells’ syndrome was diagnosed and the patient received systemic steroid. The two different diseases must be differentiated because of the different treatments that are required.

Case Report

An otherwise healthy 45-year-old woman was stung by a honeybee on her right dorsal palm while working outside. At first, she only felt severe pain. She removed the stinger by herself. After the sting, she started to feel severe and persistent pain over the wound. Then, her right hand started to swell progressively. The lesions on the right hand were painful and intensely itchy, and they progressed within hours to erythema, ulceration and swelling of the forearm. Two days later, the right forearm began to blister and become erythematous (Figure 1). She was afebrile and had no systemic symptoms. Laboratory studies were significant for an elevated white blood cell count of 12,100 cells/L, with peripheral eosinophilia of 43%. The patient was admitted with presumed bacterial cellulitis and was treated with intravenous oxacillin for 5 days. After the patient failed to respond to systemically administered

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Eosinophilic Cellulitis After Honeybee Sting

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Stings by honeybees are not uncommon and most cases cause pain but no significant medical problems. Some patients, however, have lethal complications such as acute anaphylactic shock. Cellulitis caused by honeybee sting is very rare and can be a late complication in some patients. We report a 45-year-old female patient who was stung by a honeybee, and whose right forearm showed progressive swelling with bullous formation after the sting. She was sent to our emergency department with the diagnosis of right hand cellulitis. After treatment with antibiotics for 5 days, the lesions showed no response. Then, systemic steroid was used and the lesion gradually resolved. Diagnosis of Wells’ syndrome was made according to clinical appearance, course and characteristic histopathological findings. [J Formos Med Assoc 2009;108(12):964–966]

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antibiotics, a diagnosis of bullous eosinophilic cellulitis was made by the histological finding of prominent diffuse infiltration of eosinophils into the subcutaneous tissue (Figure 2). The patient received methylprednisolone at 40 mg/day, with subsequent tapering to 20 mg/day for 10 days. Complete remission of skin eruption was obtained within 3 weeks. She was discharged and followed-up at our outpatient department.

Discussion

Wells’ syndrome is an uncommon condition of unknown etiology. The diagnosis of Wells’ syndrome is made according to the clinical appearance, course and characteristic histopathological findings. Lesions can begin with itching or tender burning sensation, followed by cellulitis-like eruption, well-demarcated nodules or plaques, and the development of vesicles or bullae. The lesions progress rapidly over 2–3 days and resolve gradually over 2–8 weeks. There are several precipitating factors, including arthropod bites, cutaneous viral infections, and cutaneous parasitic infestations. Some reports also have mentioned leukemia, myeloproliferative disorders, atopic dermatitis, fungal infections and drug hypersensitivity reactions.

Honeybee stings rarely cause cellulitis. Wells’ cellulitis is found rarely and it can be caused by hyperactivity of the immune system. The manifestations of eosinophilic cellulitis are difficult to differentiate from bacterial cellulitis, and it is easily misdiagnosed. In previous studies, some cases have started with antibiotic treatment, as with our patient. The diagnosis of eosinophilic cellulitis was established after a skin biopsy had been performed. However, before the pathological report, failure of antibiotic treatment, with peripheral blood eosinophilia elevation, remind the physician to be alert to the diagnosis and start treatment with systemic steroid. Patients with bacterial cellulitis can also have fever, and the laboratory data can reveal white blood cell shifting to the left and bacteremia. Diagnosis of Wells’ syndrome is based on typical clinical presentations such as single or multiple erythematous and edematous urticarial plaques that resemble cellulitis, which persist for weeks or months, and heal without scar and the characteristic histological picture of flame figures. Other diseases such as vesiculobullous eczematous dermatitis, bullous pemphigoid, and other inflammatory conditions should be differentiated from eosinophilic cellulitis according to pathological findings.

The rarity and clinical manifestations of Wells’ cellulitis render it difficult to differentiate from bacterial cellulitis. However, laboratory data can help the emergency physician and clinician to make the differential diagnosis between the two diseases before the pathological report, and start appropriate treatment more promptly.
References