

## VIEWER'S CHOICE

### Unusual Reactions to Insect Stings

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A variety of unusual or unexpected reactions have occurred in a temporal relationship to insect stings. We are reporting this case developing Nephrotic syndrome and acute disseminated encephalomyelitis (ADEM) because these reactions are very infrequent.

A 5.5 years old female presented with history of yellow jacket wasp stings followed by nephrotic syndrome within 2 weeks. Second episode of nephrotic syndrome occurred 1.5 months later which was treated by antibiotics and steroids. After 7 days of discharge, child again presented with encephalitis-like symptoms such as fever, fatigue, headache, nausea and vomiting followed by seizures. Other clinical features include sudden onset multifocal neurologic disturbances such as bilateral optic neuritis, aphasia, motor and sensory deficits, ataxia, movement disorders, and signs of an acute meningoencephalopathy with meningismus, a depressed level of consciousness, generalized seizures followed by tetanic spasms and coma later on. Chest radiography, complete blood count, blood biochemical analysis and routine cerebrospinal fluid (CSF) analysis were in normal range except for high sedimentation rate and hypocalcemia. A PPD skin test was also negative. Cranial MRI performed on the 3rd day of her admission and revealed multifocal diffuse symmetric hyperintense foci on T2 weighted studies and hypointense foci on T1 weighted studies in occipital, periventricular white matter and showed small areas of high signal in right basifrontal lobe. Post-contrast

T1 weighted images showed diffuse enhancement in almost all the lesions. Based on clinical and radiographic criteria a diagnosis of ADEM was made.

Nephrotic syndrome and acute disseminated encephalomyelitis (ADEM) in our case represents an unusual hypersensitivity reaction to wasp sting. There is scarce information regarding the pathogenesis of the majority of the unusual reactions and the subsequent allergic status or risk for sting anaphylaxis of people who have had these unusual reactions. Existence of association between development of nephrotic syndrome and hypersensitivity can be considered, because it is reported that minimal change nephrotic syndrome patients with atopy history have increased levels of serum IgE. Also in agreement with the relevant literatures, our case had a very favorable clinical course with prompt response to corticosteroid treatment. Regarding acute disseminated encephalomyelitis (ADEM) an initiating event appears to sensitize the immune system to brain antigens resulting in immune-mediated inflammatory response. It is hypothesized that there is cross-reactivity (molecular mimicry) between the antigens of an infectious or immunizing agent and brain antigens.

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