CLINICAL QUIZ

Periorbital Edema: The Importance of a Thorough Medical History

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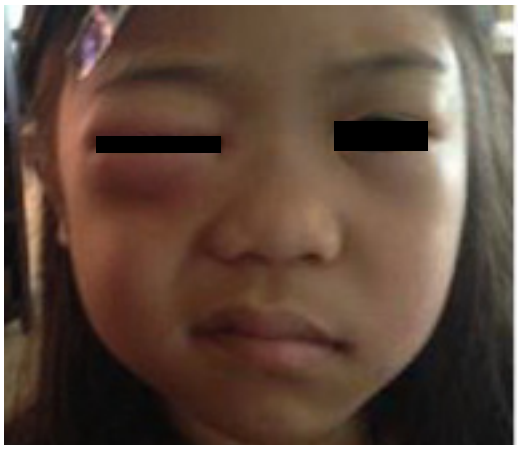
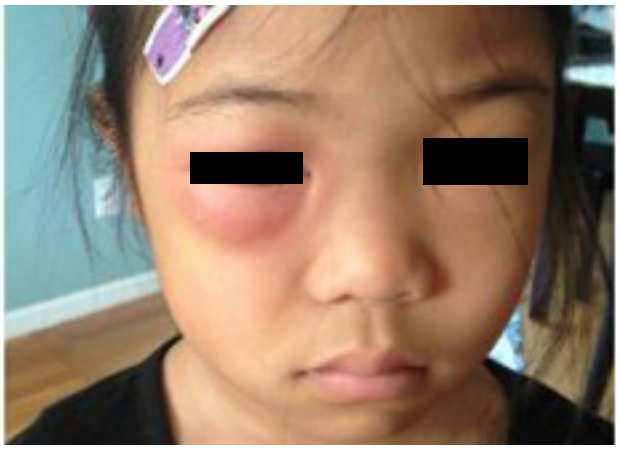
A 5-year-old Asian girl presented with right periorbital swelling. She went to a botanical garden with her parents and woke up with swelling the following morning. The physical examination showed a pruritic, erythematous, non-tender, periorbital edema. She had normal pupils, visual acuity, and extraocular eye movements. No conjunctival hyperemia or eye discharge was noted. There was no fever, chills, lip/tongue/throat swelling, shortness of breath, wheezing, coughing, rhinorrhea, nasal congestion, post-nasal drip, dermal pruritus elsewhere, or gastrointestinal symptoms. The mother reported her daughter had mosquito bites the night prior, but no hymenoptera sting. She was asymptomatic prior to going to bed.





What is the most likely diagnosis?

A. Periorbital angioedema
B. Periorbital bacterial cellulitis
C. Nephrotic syndrome
D. Skeeter syndrome
E. Traumatic eye injury
F. Venom hypersensitivity

CORRECT ANSWER: D. Skeeter Syndrome

Skeeter syndrome also is known as a significant local reaction to mosquito bites. It is caused by an immunologic response to proteins in mosquito saliva and it involves IgE, IgG, and T cell mediated hypersensitivity.[1, 2] Many people who are bitten by mosquitoes develop an immune response to these proteins; however, only a small proportion of them develop clinically relevant allergic reactions, most commonly large local reactions.

Typically, the reaction consists of a pruritic or even painful area of redness, warmth, swelling and/or induration that ranges from a few centimeters to more than 10 cm in diameter. Large local reactions develop within hours of the bite, progress over 8 to 12 hours or more, and resolve within 3 to 10 days.[3] Severe large local reactions can be accompanied by low grade fever and malaise. Large local reactions may develop an ecchymotic appearance or are associated with blisters, vesicles, or bullae. Systemic allergic reactions to mosquito bites are very rare. The diagnosis is based on the time of onset of the reaction in relationship to a witnessed or likely mosquito bite, and on the physical finding of an itchy, red, warm swollen area at the site of the bite. Management entails mosquito avoidance, non-sedating H1 antihistamines, such as cetirizine, and topical glucocorticoid.[3] For severe large local reactions that are distressing and/or interfering with normal vision, ingestion of liquid or food, or ambulation, an oral glucocorticoid such as prednisone 1 mg/kg to a maximum of 50 mg once a day may be given for five to seven days. Antibiotic treatment is not indicated for large local reactions. Prevention of large local reactions consists of mosquito avoidance, application of an insect repellent like DEET (N, N-diethyl-3-methylbenzamide, use less than 30% DEET containing compounds and wipe or wash off once indoors), and prophylaxis with an oral, non-sedating H1 antihistamine. Prognosis of Skeeter syndrome is favorable.[4]

In summary, we recommend taking a detailed medical history because if we did not know that our patient had a mosquito bite, we could have missed her diagnosis.

REFERENCES

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[4] Simons FE, Peng Z. Skeeter syndrome. J Allergy Clin Immunol 1999; 104(3):705-707. PMID: 10482852.

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