

CASE 28-1

A 40-year-old male is admitted to the hospital with 1 day of fever, joint pains, generalized lymphadenopathy, and a pruritic rash on the trunk. He has been taking amoxicillin for 5 days for a bacterial sinusitis. You suspect a drug-related exanthem due to amoxicillin.



What one test can best distinguish a possible drug reaction from viral infection or other causes?

- (A) Serum IgE level
- (B) Skin biopsy
- (C) Patch tests
- (D) CBC (complete blood count) with differential
- (E) Electrolyte panel

The correct answer is (D), CBC (complete blood count) with differential.

Symmetric morbilliform exanthems in adults are frequently caused by medication reactions. In children, viral infections play a larger role. Although most exanthems will clear without serious sequelae, it is important to consider the possibility of a more severe drug reaction that could have systemic signs and symptoms. It is also important to consider a possible viral cause.

Serum IgE is not useful in this setting. It is not reliably elevated in drug rashes. Patch tests are useful for discerning the cause of contact dermatitis episodes but are not routinely used to discern causes of drug exanthems. An electrolyte panel is unlikely to distinguish a drug reaction etiology from another problem. Likewise, even skin biopsies do not reliably distinguish between viral exanthems and drug exanthems. CBC with differential is the best test to show evidence suggestive of viral infection (leukopenia or lymphopenia) versus a drug eruption (eosinophilia) although this test also may fail to distinguish the two.