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Differentiating True Serum Sickness

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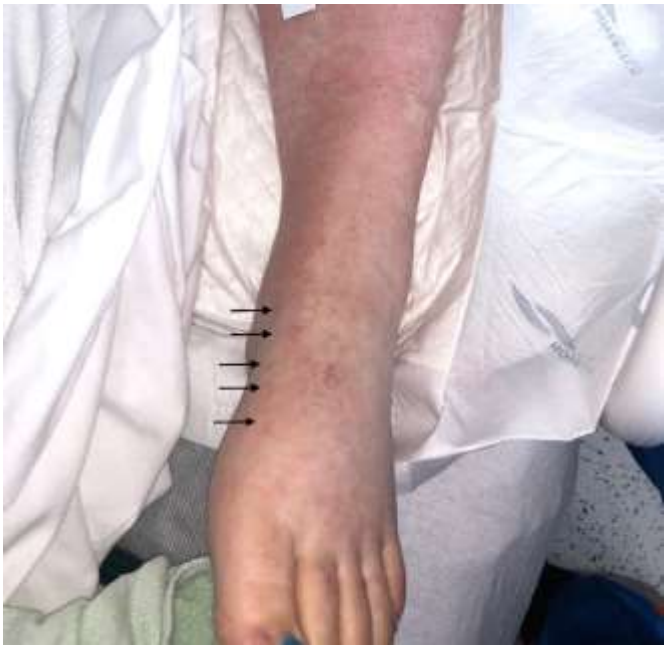
A 28-year-old female admitted for pancreatic transplant experienced graft failure on day 2, requiring graft pancreatectomy. She received 2 doses of anti-thymocyte globulin (ATG) on day of transplant. Nine days later, she was readmitted for high spiking fevers and severe arthralgias including marked bilateral temporomandibular joint (TMJ) pain. Antibiotics were initiated and she soon developed facial swelling and a diffuse morbilliform exanthem featuring serpiginous erythematous bands along the plantar margin. Labs were notable for low complement. Skin biopsy showed mild vacuolar interface dermatitis. Her case was diagnostically challenging, ultimately identified as having true serum sickness (SS) secondary to ATG. Prednisone was initiated, with complete resolution of symptoms on follow-up 3 weeks later.

TMJ pain and serpiginous erythema along the palmoplantar margins may be clinical features specific to SS. To our knowledge neither have been reported in entities with high clinical overlap including serum sickness-like reaction and DRESS. Though hypocomplementemia remains only a minor diagnostic criterion for SS, literature review suggests greater utility when levels are drawn earlier. Complement levels were low in 34 of 42 (81%) patients with SS (1-8). The 8 remaining cases had levels drawn about ten days later on average. We propose checking complement levels as close to symptom onset as possible for a quick and effective test in distinguishing SS from major overlapping drug reactions. Skin biopsies are generally non-specific; however, samples sent for direct immunofluorescence (DIF) showed vascular immune deposits in 71% of reported cases (4,5). Thus if biopsy is done, we recommend including DIF.



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