

### Case 20

L.M. is a 37 year-old man who suffered from food poisoning by *Salmonella* on a recent business trip. Three months following recovery from *Salmonella* he experienced pain in multiple joints, a burning, urethral discharge, and low back pain. The patient denied a history of sexually transmitted diseases, skin disease, or a recent sore throat. Physical examination was remarkable for conjunctival injection (“pink eye”), a large right knee effusion, and tender, swollen toes and ankles (Fig. 1).



**Fig. 1.** Swollen "sausage" toe (*left*) and inflamed ankle (*right*) in L.M.

He had tenderness in his Achille’s tendons as well as other sites of insertion of tendons to the bones. Laboratory examination revealed a mild anemia and an elevated ESR (erythrocyte sedimentation rate). A culture of his urethral discharge was sterile.

Aspiration of his knee effusion was performed. The fluid was cloudy. There were 25,000 white blood cells/ $\mu$ l, with 70% neutrophils. The joint fluid glucose level was normal and crystals were not present. No organisms were visualized and culture of the fluid was negative for bacteria. The patient was treated with NSAIDs and noted marked improvement within two weeks. However, even after one year, he experienced moderate low back pain and swelling and tenderness in his ankles.

### Questions for Case 20

- (1) What is the likely etiology of the patient’s arthritis? What other organisms can trigger “reactive arthritis?” Which individuals are predisposed to this autoimmune disease?
- (2) What is the immunological basis for reactive arthritis? What is the significance of autoantibodies in this disease?
- (3) Why was the physician taking care of the patient interested in whether the patient had a history of sexually transmitted diseases? Of skin diseases?

#### Optional clinical question:

- (4) What is the prognosis of reactive arthritis?