An 83-year-old woman with chronic gastrointestinal problems developed retinal vein thrombosis. Laboratory tests revealed an erythrocyte sedimentation rate of 45, renal dysfunction (GFR 25 mL/min), and mild anemia (hemoglobin 10 G/dL) with normal white cells and platelets. β2-microglobulin was elevated at 8.06 mg/L. A plasma cell dyscrasia was suspected and immunoglobulin testing showed monoclonal IgG, κ in the serum (28.9 g/L) with free κ chains (1.2 g/L), and κ light chains in the urine (10.2 g/L). Bone marrow aspirate contained ~10% plasma cells (CD38+CD138+) with long, slender, Auer-like inclusions (see figure) in 50% of the cells. Approximately 14% of the plasma cells had multinuclear forms. Auer-like inclusions raise the possibility of acute nonlymphocytic leukemia (ANNL). However, the patient has been followed since the previous year with no evidence of ANNL. Rare instances of Auer-like inclusions within plasma cells have been previously reported. The mechanism by which they occur and their pathophysiologic significance are not understood. Continued observations on this patient may provide more information on the unusual occurrence of Auer rods in a patient with monoclonal gammopathy.
Pseudo-Auer rods in a patient with newly diagnosed IgG myeloma

Stefani Parmentier and Joergen Radke