Roth Spots in Chronic Myeloid Leukaemia

Ragini Singh*, SP Singh**, SK Mittal***, SK Rana****

A 14-year-old girl presented with headache and diminished vision of 2 month duration. She also complained of black spots in the field of vision of her right eye. Soon her symptoms progressed to involve both eyes. This was accompanied with fatigue and weight loss. Eye examination showed multiple small haemorrhages with white centre scattered throughout the retina of both eyes, consistent with Roth spots (Figure 1). Splenomegaly extending to right iliac fossa was noted. Her white blood cell count was 250,000 per cubic millimeter. Peripheral blood film and bone marrow aspiration were consistent with the diagnosis of chronic myeloid leukaemia in the chronic phase. She was treated with hydroxyurea. Her visual symptoms improved and leucocyte count decreased. Subsequently she was advised bone marrow transplantation.

Roth spots were once believed to be pathognomonic of infective endocarditis. They are now seen as a nonspecific sign caused by the rupture of retinal capillaries, followed by the aggregation of fibrin and platelets. Other conditions associated with Roth spots are leukaemia, diabetic retinopathy, hypertensive retinopathy, HIV retinopathy, pre eclampsia, retinal vasculitis, retinal vein occlusion and traumatic brain injuries in infants.