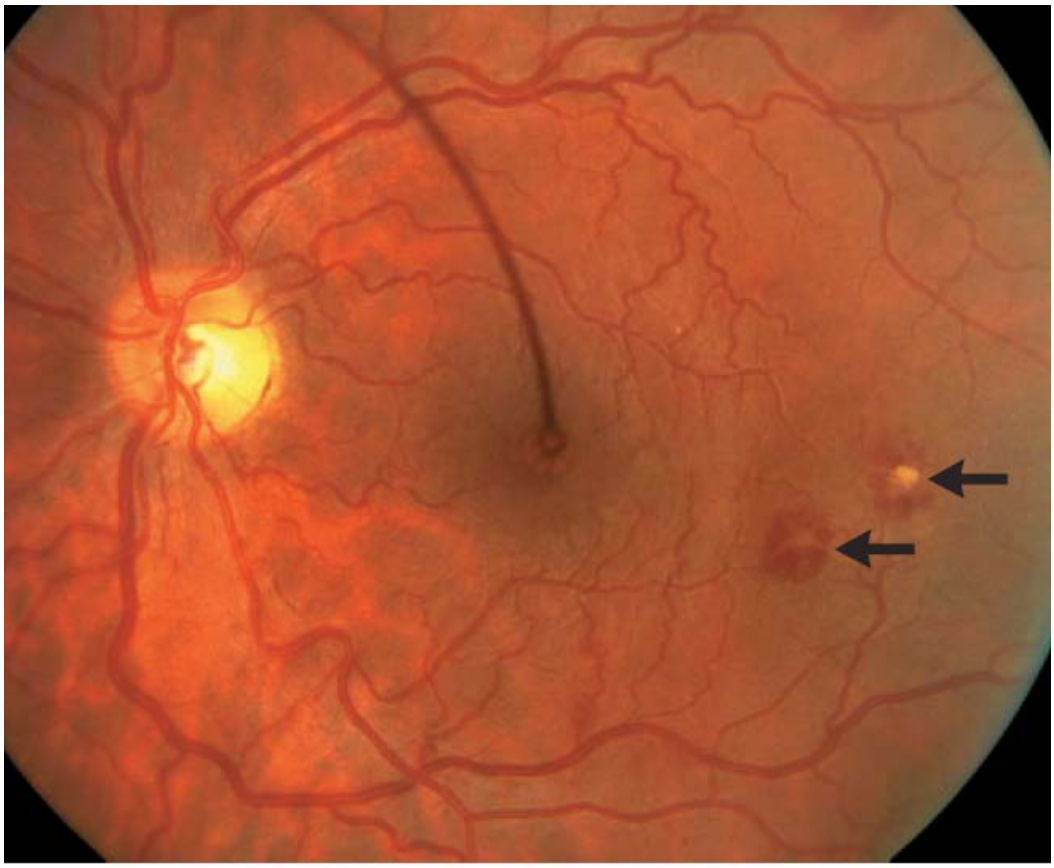

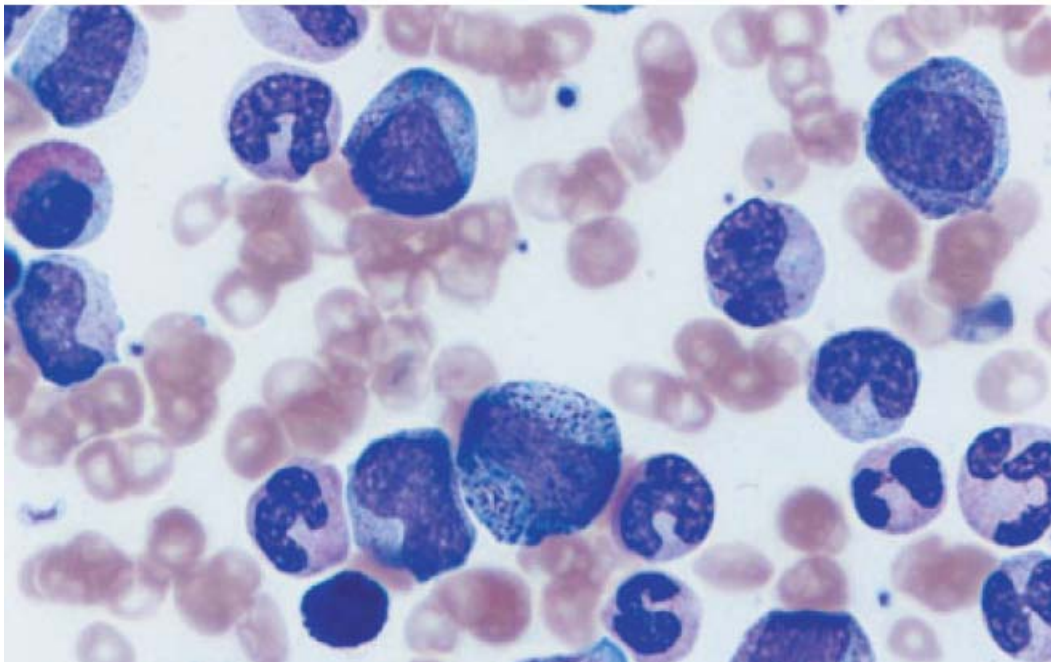

A 24 year old man with leukocytosis and blurred vision. What is the likely diagnosis?

IMAGES IN CLINICAL MEDICINE

Roth's Spots

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A 24-year-old man presented with a three-day history of a blurred patch near the center of his left visual field. He reported no fatigue or weight loss. Ophthalmoscopy showed venous dilatation and multiple Roth's spots in both retinas (arrows in Panel A, showing the fundus of the left eye). Physical examination revealed splenomegaly extending to the right iliac fossa. No fever and no cardiac murmurs were noted. When blood was examined to measure the erythrocyte sedimentation rate, an elongated buffy-coat zone was observed (Panel B, bracket); a similar examination of blood from a healthy person is shown on the left. The patient's leukocyte count was 303,000 per cubic millimeter. The blood smear (Panel C) and the morphologic features of the bone marrow were consistent with chronic myeloid leukemia in the chronic phase. The patient underwent urgent leukapheresis for the symptoms of hyperviscosity and was treated with hydroxyurea. His ophthalmic symptoms resolved, and there was a reduction in the leukocyte count. He subsequently underwent allogeneic hematopoietic stem-cell transplantation and is doing well. Roth's spots, or white-centered retinal hemorrhages, may be seen in a variety of conditions, including leukemia, subacute bacterial endocarditis, ischemic events associated with elevated venous pressure, and systemic vascular conditions with capillary fragility.

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