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Cerebral leukostasis manifesting as multifocal intracerebral hemorrhage

A patient with chronic myeloid leukemia in accelerated phase was admitted because of shortness of breath. Complete blood count showed: hemoglobin: 7.1 g/dL, platelet count: $60 \times 10^{\circ}$ /L, leukocyte count: $535 \times 10^{\circ}$ /L with 31% blasts, 5% promyelocytes, 27% myelocytes, 6% metamyelocytes, 18% neutrophils and 5% basophils. A coagulation screen showed normal prothrombin and activated partial thromboplastin times. Urgent leukopheresis and intravenous cytarabine were commenced but the patient became stuporous and comatose despite rapid reduction of the leukocyte count to $415 \times 10^{\circ}$ /L. Computed tomography showed multifocal areas of intracerebral hemorrhages (Figure 1). The patient died shortly afterwards despite aggressive resuscitation. The family refused a *post-mortem* examination.

Chor Sang Chim, Clara G.C. Ooi* University Departments of Medicine and *Radiology, Queen Mary Hospital, University of Hong Kong, Hong Kong

Correspondence: Dr. Chor Sang Chim, Senior Medical Officer, Department of Medicine, Queen Mary Hospital, Hong Kong. Phone: international +852.28554776. Fax: international +852.29741165. E-mail: jcschim@hkucc.hku.hk



Figure 1. CT scan of the brain showed multiple hyperdense foci (arrows) in the grey-white matter junction. There was a thin rim of perifocal edema around the two major hemorrhagic lesions.