

# Intracerebral Granulocytic Sarcoma in recurrence of Chronic Myeloid Leukemia

Sarcoma Granulocítico Cerebral na recorrência de Leucemia Mielóide Crônica

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A 21-year-old male with a 2-year diagnosis of chronic myeloid leukemia in complete hematologic and cytogenetic responses was admitted to hospital with drowsiness, headache and seizures. Laboratory evaluation disclosed leucocytosis with 19.0% of peripheral blasts. Brain magnetic resonance imaging (MRI) (Figure 1) corroborated the diagnosis of granulocytic sarcoma (GS) in blast crisis. MRI performed 38 days after chemotherapy was indicative of tumor regression (Figure 2).

GS is an extramedullary solid tumor composed of immature myeloid cells<sup>1</sup>. It develops before, during or after the onset of myeloid leukemia<sup>2</sup>. Intra-axial GS without involvement of skull or meninges is rare<sup>3</sup>.

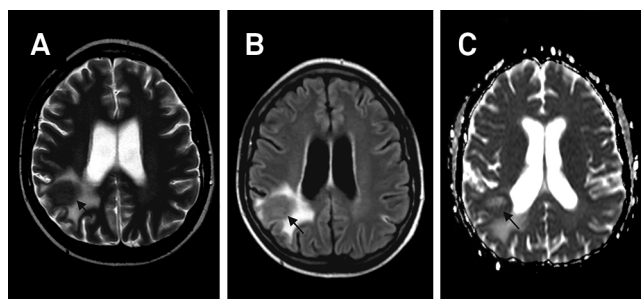


Figure 2. Follow up magnetic resonance imaging after 38 days of chemotherapy with methotrexate and cytosine arabinoside shows significant reduction of the tumor and mass effect on (A) T2 weighted image and (B) FLAIR; (C) ADC map shows areas of high signal suggesting the cellularity of the tumor was reduced over this period.

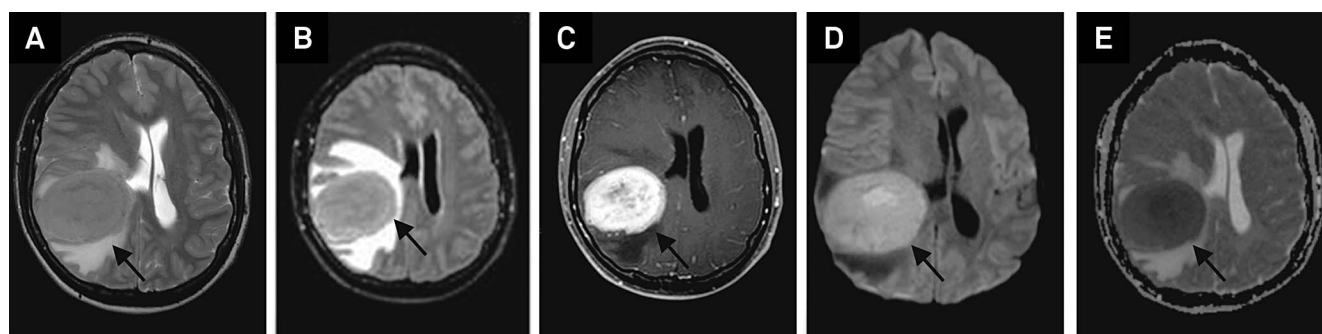


Figure 1. (A) Magnetic resonance imaging (MRI) shows an intra-axial right parietal solid lesion, isointense on T2 weighted image; (B) With edema and mass effect seen on FLAIR; (C) MRI T1 weighted image post contrast shows a heterogeneous enhancement hyperintense in (D) diffusion weighted imaging and (E) hypointense in ADC map, characterizing restricted diffusion.

## References

1. Audouin J, Comperat E, Le Tourneau A, Camilleri-Broët S, Adida C, Molina T et al. Myeloid sarcoma: clinical and morphologic criteria useful for diagnosis. *Int J Surg Pathol* 2003;11(4):271-82. <http://dx.doi.org/10.1177/106689690301100404>
2. Suzer T, Colakoglu N, Cirak B, Keskin A, Coskun E, Tahta K. Intracerebellar granulocytic sarcoma complicating acute myelogenous leukemia: a case report and review of the literature. *J Clin Neurosci*. 2004;11(8):914-7. <http://dx.doi.org/10.1016/j.jocn.2003.12.018>
3. Lee SH, Park J, Hwang SK. Isolated recurrence of intracerebral granulocytic sarcoma in acute lymphoblastic leukemia: a case report. *J Neurooncol*. 2006;80(1):101-4. <http://dx.doi.org/10.1007/s11060-006-9163-8>

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**Conflict of interest:** There is no conflict of interest to declare.

Received 12 August 2014; Received in final form 06 September 2014; Accepted 26 September 2014.