



## ULTRASOUND IMAGE OF PLEURAL GRANULOCYTIC SARCOMA

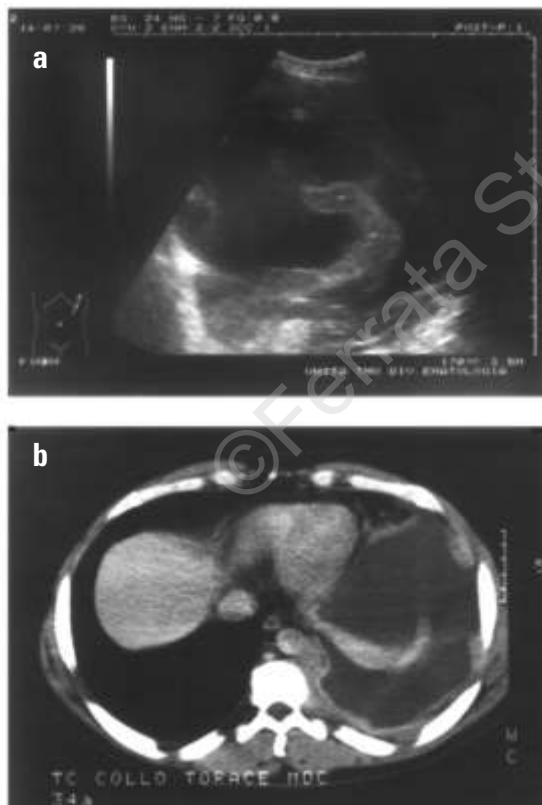
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**G**ranulocytic sarcoma (GS) is an extra-medullary tumor formed by myeloid blasts and mature granulocytes, which may precede, accompany or follow acute myeloid leukemia (AML) or a myeloproliferative syndrome.<sup>1</sup> Any area of the body may be affected; it most frequently involves bone, lymph nodes, skin or soft tissues. Pleural and mediastinal localizations are uncommon.<sup>2,3</sup>

We observed a GS with mediastinal and pleural localization in a patient who had received allogeneic bone marrow transplantation (allo-BMT) for AML. This 36 year-old male was diagnosed as FAB M4-AML, with chromosome 16 inversion, in November 1993. Treated according to the EORTC - GIMEMA AML-10 protocol, he achieved complete

remission (CR) after two induction courses and was consolidated with a third course. In April 1994 he received an allo-BMT from his HLA-identical sister. Conditioning therapy consisted of BuCy; cyclosporin and short course methotrexate were used for graft versus host disease (GVHD) prevention. The patient experienced a number of post-transplant complications: grade 2 cutaneous and intestinal acute GVHD (+ 1 month); grade 2 liver, ocular and cutaneous chronic GVHD (+4 months); HCV-related chronic hepatitis (+6 months); right femur head aseptic necrosis (+10 months); bacterial meningitis cured with specific antibiotic treatment (+19 months). In December 1996, while in hematological CR from leukemia, with a female bone marrow karyotype, moderate chest pain appeared. Physical examination showed a left pleural effusion confirmed by ultrasound examination, which also revealed a mobile hyperechoic image adhering to the diaphragmatic pleura (Figure 1a). A chest CT scan showed a mass in the anterior mediastinum which infiltrated the diaphragmatic pleura and produced a dragon-like image, similar to that observed at ultrasound, spreading out in the pleural effusion (Figure 1b). Soon after, a nodule (2x2 cm) appeared in the left supraclavicular region. Pleural fluid cytology and nodule histology showed GS. The patient is currently responding to salvage chemo therapy.

The case reported here is a further example of a GS occurring as first site of relapse after allo-BMT.<sup>4</sup> We would like to stress the usefulness of intercostal ultrasound examination in investigating pleural diseases.<sup>5</sup>



**Figure 1. a:** Left lung intercostal US scan showing a pleural effusion with a dragon-like hyperechoic image, infiltrating the pleura. **b:** CT scan showing the same image.

### References

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