Granulocytic sarcoma (GS) is an extramedullary tumor formed by myeloid blasts and mature granulocytes, which may precede, accompany or follow acute myeloid leukemia (AML) or a myeloproliferative syndrome. 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.

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 (2×2 cm) appeared in the left supraclavicular region. Pleural fluid cytology and nodule histology showed GS. The patient is currently responding to salvage chemotherapy.

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

References