Prominent Pleural Effusion Possibly Due to Imatinib Mesylate in Adult Philadelphia Chromosome-positive Acute Lymphoblastic Leukemia

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Fluid retention is a major adverse effect of imatinib mesylate (Glivec), however, unilateral abundant hydrothorax has not previously been documented in adult acute lymphoblastic leukemia (ALL) patients treated with imatinib. We encountered a 51-year-old woman with Ph [t (9:22) (q34:q11)]-positive ALL treated with imatinib, showing recurrent unilateral pleural effusion. She complained of right chest pain after just two days of imatinib administration. The chest X-ray film showed pleural effusion in the right lung field (Fig. 1-a); the pleural effusion resisted treatment with a diuretic (furosemide) and she showed synchronous edema and gain of body weight. Tracheocentesis revealed the fluid was exudate without any evidence of infection or negative study for BCR-ABL fusion gene detected by fluorescence in situ hybridization. After discontinuation of imatinib, effusion decreased immediately (Fig. 1-b). She was again treated with imatinib as consolidation therapy, and
marked pleural effusion again appeared. Although abundant pleural effusion in adult ALL patients treated with imatinib has not been documented, this might be an adverse effect of imatinib and management for this adverse effect should be emphasized.