Acute pericarditis and pleural effusion complicating cytarabine chemotherapy

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BACKGROUND: Pericarditis is a rare but possibly severe complication of treatment of acute leukemia with cytarabine. CASE REPORT: We report a possibly cytarabine-induced acute pericarditis and pleuritis with a rapid onset. A patient with acute myelomonocytic leukemia developed an isolated pericarditis 3 weeks after the first course of chemotherapy with cytarabine and idarubicin. The second course of chemotherapy with cytarabine and amsacrine was started after clinical improvement; 3 days later an acute pericarditis with a large pericardial effusion accompanied by a left pleural effusion developed. A pericardio- and pleuracentesis was performed and the symptoms improved rapidly without reaccumulation of the fluid. The third course of chemotherapy with mitoxantrone and etoposide was completed without further cardiopulmonary complications. CONCLUSION: The differential diagnosis of pericarditis in the setting of chemotherapy with cytarabine should include cytarabine-induced pericarditis. The pathogenesis remains unclear, directly toxic and immunological mechanisms are suggested. Severe progression with massive pericardial effusion necessitating risky pericardiocentesis can occur and therefore a therapy with high-dose corticosteroids should be considered early.