Medical Expertise

"Development of the European Network in Orphan Cardiovascular Diseases"
„Rozszerzenie Europejskiej Sieci Współpracy ds Sierocych Chorób Kardiologicznych"

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CASE SUMMARY

The authors present an interesting case report of a 63-year-old patient with recurring pericardial fluid. She had a history of coronary artery disease, arterial hypertension, persistent atrial fibrillation (she discontinued dabigatran therapy due to abdominal discomfort), type 2 diabetes mellitus, COPD, hyperthyroidism, she had undergone hysterectomy. The patient was admitted to Cardiology Department due to increasing dyspnea preceded by fever and symptoms of gastroenteritis. Initial transthoracic echocardiographic examination (TTE) demonstrated considerable amount of pericardial fluid (up to 25 mm), fluid in both pleural cavities; left ventricle systolic function was impaired (LVEF 40-45%) with regional wall motion abnormalities (the patient had a history of myocardial infarction). Laboratory tests revealed elevated inflammation markers, elevated levels of d-dimer and Ca-125, low TSH, troponin level was within normal limits. Chest X-ray ruled out pneumonia, CT scan of abdominal cavity and pelvis did not reveal pathologies. Due to quick heart rate in AF electrical cardioversion was considered but not performed because of thrombus in left atrial appendage disclosed by TEE. By means of pericardiocentesis and thoracocentesis bloody inflammatory effusive fluid was evacuated, cytological examination revealed no neoplasmatic cells, microbiological tests were negative. There was a temporary improvement of the patients general condition but after a few days the pericardial and pleural effusion recurred with symptoms, this time puncture produced straw-colored fluid. Subsequent medical treatment comprised antibiotics, colchicine, NSAIDs, LMWH and furosemide. In spite of intensive pharmacotherapy pericardial effusion remitted accumulated again with relapse of dyspnea, the patient required pericardiocentesis for the third time (the fluid was once more straw-colored). Diagnostic tests for autoimmune diseases and tuberculosis were negative. The patient's clinical condition began to improve and the amount of pericardial fluid did not increase (the last TTE showed 5 mm layer), after pharmacotherapy modification heart rate was acceptable, VKA administration was started.

DISCUSSION

Approximately 5% of emergency department patients are diagnosed with pericarditis. The most common cause of infective pericarditis are various viral infections. In patients with

untreated tuberculosis-associated pericarditis morbidity may be up to 85%. Pericarditis often accompanies autoimmune diseases, may be a complication of myocardial infarction or hypothyroidism, thoracic or cardiac surgery, may be induced by medications (amiodarone, thiazide diuretics, cyclosporine). About 1/3 of pericarditis cases are considered idiopathic. Pericardial fluid may be a sign of tumors (both primary and secondary). Regarding natural history of pericarditis we distinguish three main clinical forms: acute, chronic and recurrent. Patients usually complain of chest pain, dyspnea, dry cough. Non-invasive tests play the basic role in establishing the diagnosis, transthoracic echocardiography (TTE) remains the chief method. According to the current ESC guidelines the absolute indications for pericardiocentesis are: cardiac tamponade, diastolic fluid thickness exceeding 20 mm in TTE, suspicion of tuberculous or purulent pericarditis. Non-specific treatment comprises NSAIDs (mainly ibuprofen), colchicine, glicocorticosteroids. Specific treatment depends on etiology. In case or recurrent pericarditis unresponsive to conservative treatment pericardiectomy should be considered.

EXPERT'S OPINION

In the case presented above throughout the diagnostic process the authors ruled out acute coronary syndrome, bacterial infection (including tuberculosis), autoimmune process and malignant diseases. The symptoms that preceded admission to Hospital first of all suggest a viral infection. Dabigatran therapy might have led to initially bloody exudate in pericardial and pleural cavities. Every pericardiocentesis procedure during hospitalization was completely justified and with aid of medical treatment led to patient's recovery. Considering elevated d-dimer level (which may have been related to inflammatory process) CT pulmonary angiogram or lung ventilation-perfusion scan should be considered to exclude pulmonary embolism. The patient should also be consulted by an endocrinologist. At present there are no indications for surgical management, strict cardiologic observation during follow-up is advised.

CONCLUSION

Strict cardiological follow-up is recommended. The patient does not require thoracic surgery.

REFERENCES

1. Guidelines on the Diagnosis and Management of Pericardial Diseases (EHJ 2004;25:587-610) ; B. Maisch FESC, P. Seferovic FESC, A. D. Ristic FESC, R. Erbel FESC, R. Rienmüller, Y. Adler, W. Z. Tomkowski, G. Thiene FESC, M. H. Yacoub FESC

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