SURGICAL TREATMENT OF HEART MYXOMAS

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HURŠKI TREATMAN MIKSOAMA SRCA

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ABSTRACT

During a period from 1961 until May 2006, there were 50 patients - 32 females and 18 males - with myxoma of the heart who were treated at the Clinic of Cardiac Surgery of the Military Medical Academy in Belgrade. In 47 patients myxoma was situated within the left atrium, in 3 patients within the right atrium, and in one case within the left and the right ventricle each. The classic triad of myxoma clinical presentation is AV valvular obstruction in over 80% of patients, embolism as well as systemic and constitutional symptoms. Diagnosis has been performed mainly by noninvasive methods, mostly echocardiography. All patients were operated using extracorporeal circulation and complete removal of tumor was done, followed by pathohistological verification. There were no recurrences.

Key words: heart neoplasms, myxoma, cardiac surgical procedures

RESULTS

Eighty-six percent of myxomas were found at the left atrium, 10% at the right atrium, 2% at the left ventricle and 2% at the right ventricle. There were neither multiple, nor biatrial tumors. In majority of our patients (over 80%) cardiac symptoms prevailed, predominantly with symptoms of malfunction of AV valve. Embolism appeared in 5 (10%) patients. Three youngest patients (6%) were asymptomatic. Functionally, the patients belonged into NYHA I – NYHA IV categories.

Routine diagnostic methods combined with echocardiography and heart catheterization during last three decades were used in myxoma diagnostics (Table 1).

The operations performed on our patients are shown in Table 2.

The emergency operation was performed in three patients; while in the rest 47 patients the operation was an elective procedure. Forty seven of fifty operated patients went home without complications. Three patients (6%) died. During the last 26 years mortality rate was zero. There were no relapses.

DISCUSSION

Myxomas could be localized within all heart cavities, but they show special predilection for the left atrium in 75% of cases (1-4, 12, 13). Atrial myxomas generally arise from the interatrial septum at the border of the fossa ovalis, but they can originate from any other location within the atrium, including appendage (4). In our series, about 3% of cases can be found into the right atrium (2, 12), 1% at the right ventricle, and 1% at the left ventricle, which were both successfully removed (14).

Malignant transformation is rather rare (2, 12, 13). About 5% of myxoma patients show familial pattern of tumor development; approximately 20% of them have complex myxomas or Carney’s complex: associated conditions such as adrenocortical nodule hyperplasia, Sertoli cell tumors of the testicle, pituitary tumors, multiple myoid breastfibroadenoma, cutaneous myxomas, and facial and labial spots (18). In spite of careful investigation, we have never determined any of these conditions in our patients.

Histologically, myxomas are composed of polygonal cells and capillary channels within an acid mucopolysaccharide matrix (4). The base of the myxoma contains a large artery and veins that connect them with subendocardium and in most cases they tend to grow into the overlying cardiac cavity rather than into surrounding myocardium (18). All our removed myxomas have been histologically verified, and dilemma arose only in one case. The classical triad of myxoma clinical presentation is intracardiac obstruction with congestive heart failure (67%), embolization (29%), systemic or constitutional symptoms of fever (19%) and weight loss and fatigue (17%) (13-15, 19, 20). The nature of these symptoms depends on size, localization and way of tumor attachment.

Majority of the patients (>80% in our series) have dominant symptoms of obstruction of the mitral and tricuspid valve with signs of mitral stenosis, right heart failure all the way to pulmonary edema, which appeared in three of our patients. Large ventricular myxomas may mimic ventricular outflow obstruction. The left ventricular myxoma is able to produce the same effect as subaortic or aortic stenosis (14), whereas right ventricular myxomas can simulate right ventricular outflow tract, pulmonary valve obstruction or pulmonary thrombembolism (12).

Emboli due to myxoma fragility represents the second most common mode of presentation in 30–40%