

## **Diagnosis and surgical treatment of valvel lesions in heart myxomas**

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The frequency of detection of heart tumors in cardio surgical clinics ranges from 0.09% to 1.9% of the total number of hospitalized patients. Myxomas account for up to 75% of cardiac tumors. The growth of cardiac myxomas (CM) may be accompanied by damage to the valvular structures of a different nature.

**Aim of the study:** To determine the frequency, mechanism of valve damage in cardiac myxomas (CM) and methods for their correction.

**Material and Methods:** In the N.M. Amosov National Institute of Cardio-Vascular Surgery of the NAMS of Ukraine for the period from 1.01.1969 to 01.01.2022 984 consecutive interventions for primary heart tumors was performed. Cardiac Myxomas (CM) were found in 876 (89%), of which in 764 (87.2%) cases - CM of the left atrium (LA). The age of patients with HM was 3 to 79 years (on average  $47.5 \pm 3, 4$  years). The 631 of these (72.7%) aged 31 to 60 years. The number of female was 642 (73, 9%).

Nonmixomatous benign heart tumors were observed in 39 (3.9%) cases, malignant tumors of the heart - in 69 (7.0%). Surgical correction of valvular lesions at CM was performed in 57 (6.6%) patients. In 22 (38.6%) cases isolated mitral valve (MV) lesion was observed, in 32 (57.1%) - tricuspid valve (TV), in 2 (3.5%) cases - aortic valve (AV) lesion, in 1 case (1.8%) - a combination of mitral and aortic valve lesions, in 18 (31.6%) cases - lesions of the mitral and tricuspid valves. Among them, mechanical damage to valvular structures by the tumor was detected in 29 (50.9%) patients. Involvement of the valvular apparatus in the tumor process was observed in 10 (17.6%) patients. In 1 (1.8%) patient, myxoma of right ventricle was attached to the papillary muscles and chords of the TV, in 9 (15.8%) cases of LA myxoma affected the mitral valve leaflets. Surgical correction of valvular lesions was performed in 67 (7.7%) patients: in 14 (1.6%) cases - prosthetic valves (9 - MV, 1 - TV, 3 - AV, 1 - AV + MV), in 43 (4.9%) - plastic surgery with a positive functional effect, and in 9 (1.0%) cases, isolated removal of the tumor from the valvular apparatus was performed.

**Results:** Hospital mortality over the past 20 years was 0% in the surgical treatment of CM; i.e 520 operations were performed without fatalities. However, it should be noted that by 2000, at the time of formation of tactics for surgical treatment of CM, hospital mortality was 4.6% (39 cases).

Survival in the period up to 20 years was 79.8%. In the follow up period in I f.k. NYHA was 584 (78.3%) patients, in II f.k. - 118 (14.8%). Recurrences of CM were found in 18 (2.1%) patients between 2 and 12 years (mean  $3.5 \pm 0.4$  years) after primary surgery. Repeated surgery after correction of valvular lesions in CM was required in 1 patient (1.8%).

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**Conclusion:** Correction of valvular lesions in the treatment of cardiac myxomas allows achieving radical surgery and good immediate and long-term results. In the follow up period Echo CG control of valve structures is necessary, after their correction at removal of heart tumors.

### **Biography**

After education in the Kiev Medical Institute named O.O. Bogomolets in 1984, worked as a surgeon in the Kyiv's clinic No. 1 until 1988. From 1988 to 2001 worked in the N.M. Amosov National Institute of Cardio-Vascular surgery of the National Academy of Medical Sciences of Ukraine as doctor-surgeon. Isaenko has a higher qualification category in the field of "Surgery of the heart and main vessels". V. Isaenko defended in 2005 his Ph.D. thesis on the topic: "Surgical correction of mitral valve lesions in infectious endocarditis".

Since 2001, V. Isaenko works as an Assistant, since 2012 to present - Associate Professor of the Department of Cardiac and main vessels surgery at the National University of Health Care named P.L. Shupik, existing on the base of the N.M. Amosov National Institute of Cardio-Vascular surgery of the National Academy of Medical Sciences of Ukraine. Associate professor received his academic title in 2013. V. Isaenko is the author of more than 150 scientific articles on various aspects of cardiac surgery, has 12 author's certificates for inventions. V. Isaenko is the member of the Association of Cardiovascular Surgeons of Ukraine.

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