

Genuine biatrial myxoma: The rarest form of myxoma

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We present a case of a 37-year-old male patient who had hemoptysis combined with fatigue on exertion that were present for a few months, for which he underwent further evaluation. The only comorbidity was epilepsy as a consequence of head trauma in a car crash 18 years earlier, which was well controlled by therapy.

Computed tomography (CT) revealed a heart tumor located mainly in the right atrium measuring 72 × 45 mm but also spreading through the patent foramen ovale into the left atrium, measuring 15 × 15 mm in size (Figure 1A). A small oval tissue consolidation was registered in the lingula of the left lung, 17 mm in diameter, with a filling defect in the corresponding segmental artery altogether indicating an embolism. Echocardiography confirmed the presence of a biatrial tumor that mostly resembled myxoma. It was attached to the interatrial septum with a stalk, freely moving and partially passing through the tricuspid valve, consequently compromising normal blood flow (Figure 1B, C; Supplementary material, Video S1). All laboratory findings were normal and coronary arteries on CT coronary angiography were without lesions. The Heart Team recommended surgical removal of the tumor.

Surgery was performed in general endotracheal anesthesia through total median sternotomy. Pericardiotomy showed a normocardic heart in sinus rhythm, situs solitus, normal in size and systolic function, with no visible scar tissue. Further surgery was performed with total cardiopulmonary bypass, using intermittent antegrade hyperkalemic solution (St. Thomas). The interatrial septum

was approached directly through the right atrium which was normal in size but entirely filled with a tumor mass. The tumor was yellow/gray, with a papillary surface and a gelatinous structure, showing signs of focal hemorrhage (Figure 1D). The tumor mass was completely removed. The total aortic cross-clamping time was 37 minutes, with a total bypass time of 50 minutes.

The postoperative course was uneventful. Control echocardiography showed preserved systolic and diastolic function of the heart without pericardial effusion. Microscopic analysis of the tumor displayed typical features of myxoma and therefore confirmed our diagnosis (Figure 1E). The patient was discharged on the 6th postoperative day in good general condition on acetylsalicylic acid, along with nebivolol and hydrochlorothiazide for grade 1 hypertension with tachycardia.

Although myxomas are the most common heart tumors, they are a rare entity. Their incidence is 0.5 per million people per year [1]. About 75% of myxomas occur in the left atrium, 15–20% in the right atrium, 3%–4% in the left or right ventricle, and <2.5% in both atria [2]. Myxomas involving both atria are usually independent of each other [3]. Our case is unique because it was a myxoma originating from the right atrium, passing through the foramen ovale, and affecting the left atrium. It is the rarest form of biatrial myxoma, the so-called genuine biatrial myxoma [3].

Supplementary material

Supplementary material is available at https://journals.viamedica.pl/kardiologia_polska

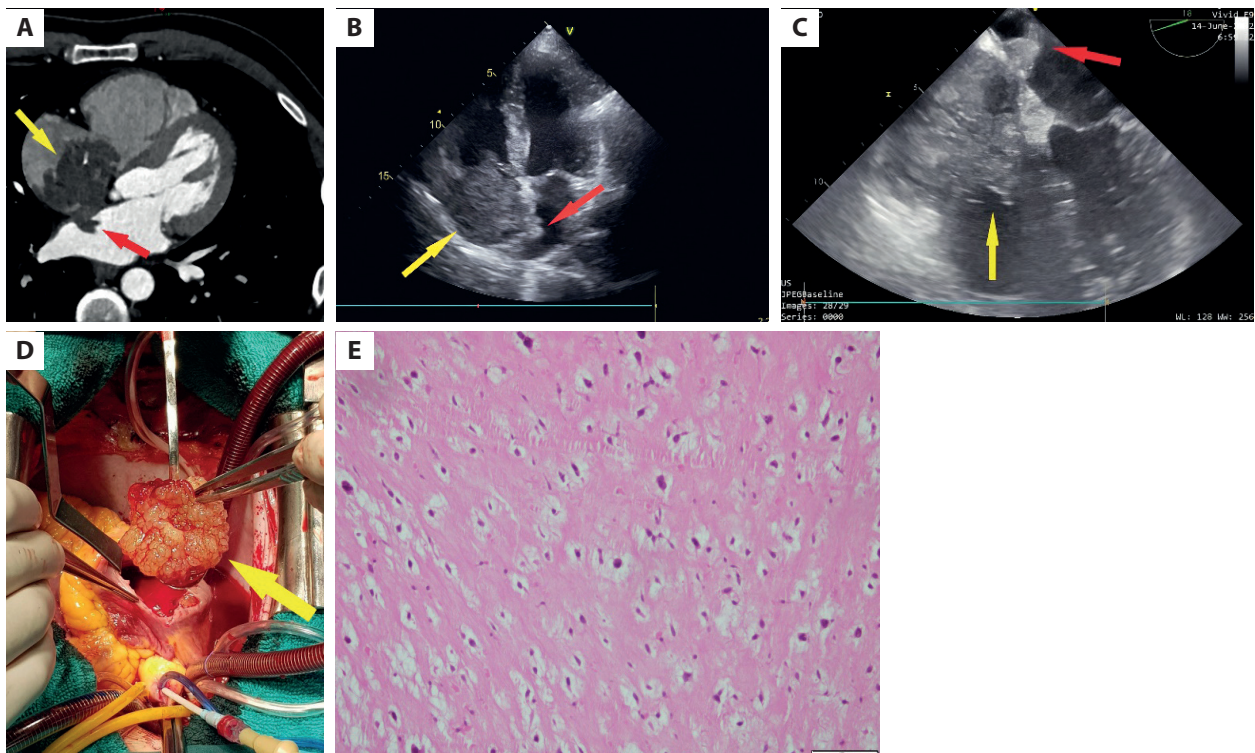


Figure 1. **A.** Computed tomography: the tumor located mainly in the right atrium (yellow arrow) but also spreading through the foramen ovale into the left atrium (red arrow). **B.** Transthoracic echocardiography, apical 4-chamber view: the tumor almost completely fills the right atrium (yellow arrow) while part of the tumor passes the interatrial septum and expands into the left atrium (red arrow). **C.** Transesophageal echocardiography, 4-chamber view: the tumor partially passes through the tricuspid valve and partially fills the right ventricle with every heart cycle (yellow arrow); part of the tumor is located in the left atrium (red arrow). **D.** Intraoperative view of the tumor: papillary surface with focal signs of hemorrhage, the tumor was completely excised (yellow arrow). **E.** Microscopic analysis: typical myxoma with polygonal cells with hyperchromatic nuclei and abundant myxoid stroma (H&E, 20x)

Article information

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