

A Rare Localization of the Papillary Fibroelastoma

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Papillary fibroelastoma is a benign cardiac tumor, generally small and with papillary fronds, third in frequency after cardiac myxoma and lipoma, with a prevalence of about 10% of all cardiac tumors. Its localization, similarly to other cardiac benign tumors, prefers the endothelium of the valves leaflets, most commonly mitral and aortic valves, less frequently tricuspid valve.¹ It is discovered occasionally or following symptoms due to systemic or coronary embolization. Symptoms due to obstruction of flow are rare. Surgical excision is curative and its recurrence rare if the resection of margins are disease-free.¹

In December 2020, a 58-year old patient was admitted in the Coronary Intensive Care Unit of the Tor Vergata University Hospital for chest pain due to acute coronary syndrome involving the right coronary artery. Consequently, he underwent stent implantation on the posterior descending artery. Trans-thoracic echocardiogram performed during hospitalization showed a pedunculated and rounded right atrial mass in proximity of the tricuspid valve, between septal and posterior leaflets.

Indication to surgery was given after stabilization of clinical conditions; and therefore, the patient was discharged and, re-hospitalized at our Division on March 2021.

Trans-thoracic echocardiogram showed a rounded and pedunculated formation, with inhomogeneous echo structure, regular margins, maximum diameters of 1.7 cm x 1.4 cm, in the proximity of the free wall of the right atrium, with an implant base near the septal leaflet of the tricuspid valve, with associated moderate valve regurgitation (Figure 1). Perioperative trans-esophageal echocardiogram confirmed these findings. Following a median sternotomy, cardio-pulmonary bypass was instituted by means of aorto-bicaval cannulation; the heart was arrested with a single dose of cold crystalloid antegrade cardioplegia. After right atriotomy, a rounded mass extremely mobile and remarkably jelly-like consistency was detected, about of 1.5 cm x 2.0 cm dimension, with a small peduncle 1.0 cm long, adhered to the septal leaflet of the tricuspid valve

(Figure 2-3). The tumor was completely removed at its base. The solution of discontinuity of the septal leaflet, 1.0 cm long, was reconstructed by means of a double continuous 5.0 polypropylene suture (Figure 4).

Right atriotomy was closed, aortic clamp was removed, and patient was weaned from cardiopulmonary bypass. Trans-esophageal echocardiogram did not show tricuspid valve regurgitation.

Histological examination diagnosed a gelatinous-mucoid consistency mass compatible with papillary fibroelastoma. Postoperative course was uneventful, and patient was discharged in seven postoperative day.

One-month follow-up echography did not showed recurrence of disease and normal tricuspid valve function.

References

1. Kirklin JW, Barratt-Boyes B. Cardiac Surgery. Elsevier; 2013. 758 p.

Figure legends

1. Preoperative trans-thoracic echocardiography showing a single mass in the right atrium in continuity to the tricuspid valve.
2. Intraoperative picture of the mass.
3. Morphological characteristics of the resected mass.
4. Surgical result following mass resection and septal leaflet repair.