

Mystery of the Right Sided Heart Failure in a Young Patient

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Abstract A 45 yr old female presented with clinical features of right side heart failure. 2D Echocardiography examination showed a homogenous, irregular, fimbriated mass attached to pulmonary valve, causing right ventricular outflow obstruction, with severe tricuspid regurgitation. To the best of our knowledge, this is the first case report of pulmonary valve mass, possible papillary fibroelastoma, which is large enough to cause right ventricular outflow obstruction, leading to severe tricuspid regurgitation and right sided heart failure.

Keywords: pulmonary valve, mass, right sided heart failure

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1. Introduction

Pulmonary valve mass (fibroelastoma) is a rare cardiac tumour and it may cause right ventricular outflow obstruction, when sufficiently large in size. Many case reports in literature describe various masses on pulmonary

valve, but this case report is unique because here we describe a large mass on pulmonary valve causing right sided heart failure due to right ventricular outflow obstruction, which was never described in the past.

2. Case Report

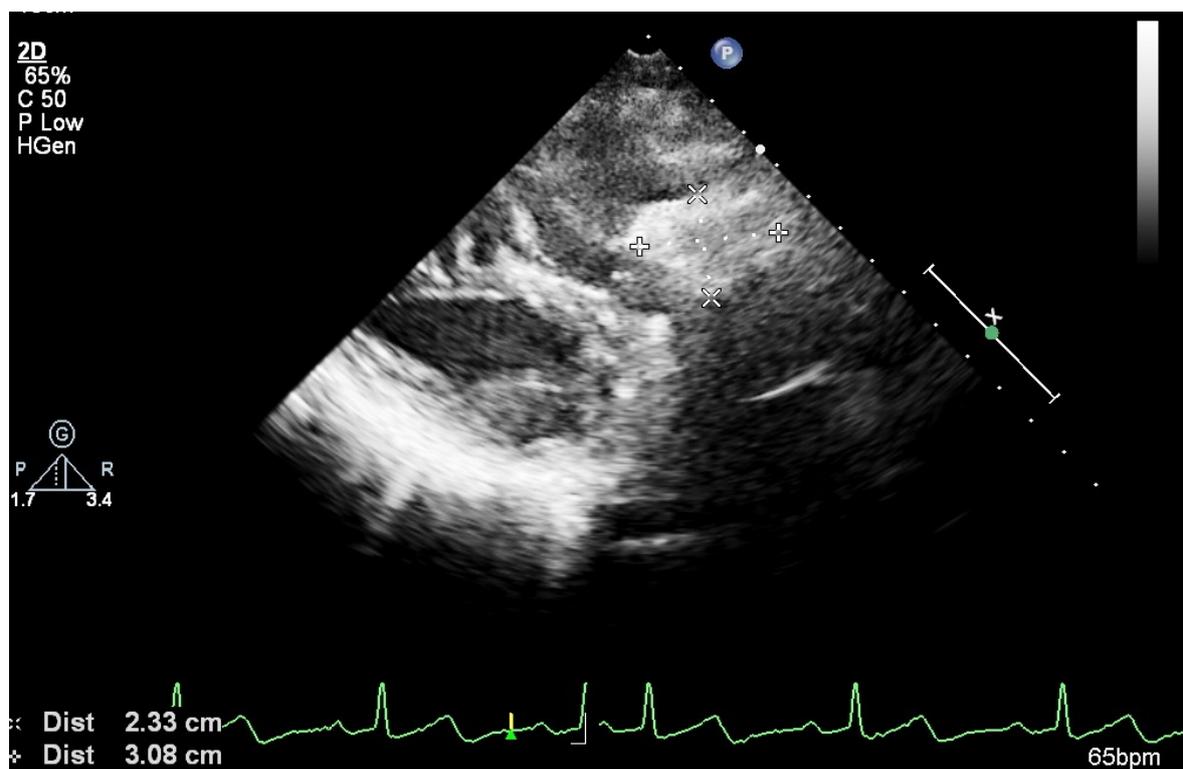


Figure 1. 2D Echocardiogram modified parasternal long axis view, showing mass attached to pulmonary valve causing right ventricular outflow obstruction

obstruction leading to hypertensive severe tricuspid regurgitation.

To the best of our knowledge, about 50 cases of pulmonary valve papillary fibroelastoma have been described to date [1,2,6,7,8]. But most of them are small and do not disrupt the valve function, most of them have been found incidently at autopsy, and few as incidental finding in echocardiography examination [2,6].

4. Conclusion

Posiibility of pulmonary valve mass should be considered in a patient with right side heart failure without any risk factors. This is probably the first case report of pulmonary valve mass described, possibly papillary fibroelastoma which is which is large enough to cause RVOT obstruction leading to hypertensive severe tricuspid regurgitation and right sided failure.

Statement of Competing Interests

Authors have no competing interests.

References

- [1] Sun JP, Asher CR, Yang XS, et al: Clinical and echocardiographic characteristics of papillary fibroelastomas: A retrospective and prospective study in 162 patients. *Circulation* 2001; 103: 2687.
- [2] Gowda RM, Khan IA, Nair CK, Mehta NJ, Vasavada BC, Sacchi TJ. Cardiac papillary fibroelastoma: a comprehensive analysis of 725 cases. *Am Heart J* 2003; 146(3): 404-410.
- [3] Burke A, Virmani R: *Tumors of the Heart and Great Vessels. Atlas of Tumor Pathology. 3rd Series, Fascicle 16* Washington, DC, Armed Forces Institute of Pathology, 1996.
- [4] Kuon E, Kreplin M, Weiss W, et al: The challenge presented by right atrial myxoma. *Herz* 2004; 29: 702.
- [5] Hekmat M, Rafieian S, Aval ZA, Khani M, Taherkhani M, Movahed MR. Asymptomatic pediatric pulmonic valve myxoma involving the right ventricular outflow tract: a case report and review of the literature. *J Heart Valve Dis.* 2012 May; 21(3): 398-400.
- [6] Bhagwandien NS, Shah N, Costello JM Jr, Gilbert CL, Blankenship JC. Echocardiographic detection of pulmonary valve papillary fibroelastoma. *J Cardiovasc Surg (Torino).* 1998 Jun; 39(3): 351-4.
- [7] Park MY, Shin JS, Park HR, Lim HE, Ahn JC, Song WH. Papillary fibroelastoma of the pulmonary valve. *Heart Vessels.* 2007 Jul; 22(4): 284-6.
- [8] Costa MJ, Makaryus AN, Rosman DR. A rare case of a cardiac papillary fibroelastoma of the pulmonary valve diagnosed by echocardiography. *Int J Cardiovasc Imaging.* 2006 Apr; 22(2): 199-203.