Giant papillary muscles masquerading as a left ventricular mass: an incidental intraoperative echocardiographic finding

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A 20-year-old woman underwent a subaortic membrane resection due to the left ventricular outflow tract (LVOT) obstruction. Two giant papillary muscles were found incidentally on intraoperative echocardiography that were distinct from the LV wall and did not contribute to the LVOT obstruction (Figs 1 and 2). Reports suggested similar masses as rare fibroelastomas, occasionally requiring surgical resection.

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Figure 1: (A) Transoesophageal echocardiogram (TEE) live 3D zoom from the ventricular view. The yellow arrow indicates the posterior-medial papillary muscle; the orange arrow indicates the posterior mitral valve leaflet; the green arrow indicates the anterior mitral valve leaflet; the red arrow indicates the subaortic membrane; the blue arrow indicates the aortic valve. (B) TEE deep transgastric view with the continuous wave Doppler across the aortic valve. Flow obstruction secondary to the subaortic membrane is shown with the dagger sign and with a peak velocity of 4.04 m/s and a peak PG of 65 mmHg.

Figure 2: (A) The TEE midoesophageal (ME) 2C view. The orange arrow indicates the elongated giant anterior-lateral papillary muscle. The blue arrow indicates chordae attached to the papillary muscle. (B) TEE ME modified 4C view. The blue arrow indicates the posterior-medial papillary muscle (1.03 cm × 1.42 cm); green arrow indicates the anterior-lateral papillary muscle (2.47 cm × 1.69 cm); the red arrows indicate attached chordae to each papillary muscle.

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