

IMAGE FOCUS

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Extra-cardiac compression and left ventricular inflow obstruction as a complication of a Sengstaken–Blakemore tube

D. De Cock^{1*}, P. Monballyu², J.U. Voigt¹, and J. Wauters²

¹Department of Cardiology, University Hospitals Leuven, Herestraat 49, 3000 Leuven, Belgium and ²Medical Intensive Care Unit, University Hospitals Leuven, Leuven, Belgium

*Corresponding author. Tel: +32 16344235, Fax: +32 16344240, Email: decocckdries@gmail.com

A 78-year-old man was admitted for a proximal humerus fracture after an accidental fall. On Day 4 after admission, he developed haematemesis. Oesophagogastrosocopy revealed oesophageal varices. Bleeding could be initially controlled by an endoscopic ligature of the varices, but 1 h later, recurrent haematemesis was seen. A Sengstaken–Blakemore tube was passed down the oesophagus and the gastric balloon was inflated inside the stomach. A traction of 1 kg was applied to the tube, so that the gastric balloon compressed the gastroesophageal junction. Since the patient had become haemodynamically stable as haematemesis stopped, the oesophageal balloon was not inflated.

Five hours after placement of the tube, the patient became hypotensive and tachycardic, although no signs of recurrent haematemesis were seen. Vasopressors were started without restoration of adequate tissue oxygenation. Serum lactate levels rose to 4.2 mmol/L. An urgent transthoracic echocardiogram revealed an extra-cardiac spherical mass with a diameter of 53 mm, compressing the left atrium (Panel A, Supplementary data online, videos 1–3). Using continuous-wave Doppler, peak flow velocities over the mitral valve were ~1.5 m/s.

We assumed that the gastric balloon migrated to the oesophagus, resulting in compression of the left atrium, causing underfilling of the LV and shock. Reflex hypotension as a response to acute oesophageal dilatation seemed unlikely, since in this setting bradycardia or atrioventricular block would be observed. After the gastric balloon was

deflated, the compressive structure disappeared from the echocardiographic images (Panel B, Supplementary data online, videos 4–6). The patient's blood pressure normalized and vasopressors could be stopped.

The figure shows extracardiac compression by the gastric balloon (asterisk) of the Sengstaken tube with collaps of the left atrium (arrows) in the parasternal long-axis view (Panel A, top), the parasternal short axis view (Panel A, middle), and the apical four-chamber view (Panel A, bottom). After deflation of the balloon, the compression of the left atrium is no longer evident (Panel B).

Supplementary data are available at *European Journal of Echocardiography* online.

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