Left ventricular outflow tract to left atrium fistula due to non-valve *Listeria monocytogenes* endocarditis

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A 74-year-old man with human immunodeficiency virus infection presented at the Emergency Room for a recent history of intermittent fever and palpitations. On admission, he showed a good compensation and a Grade 4/6 systolic murmur best heard along the lower left sternal boarder. Electrocardiogram depicted an atypical atrial flutter. Chest X-ray was normal. Laboratory testings were within the normal range, excepted for a mild increase in polymorphonuclear leucocytosis, erythrocyte sedimentation rate, and C-reactive protein. Urine culture and coproculture were negative. Serial blood cultures resulted positive for *Listeria monocytogenes*. The transthoracic echocardiogram showed a ruptured-flailing mitral-aortic intervalvular fibrosa in parasternal long- and short-axis views (Panels A and B; see Supplementary material online, Video S1), and colour Doppler echocardiography demonstrated communication to both the left ventricular outflow tract (LVOT) and the left atrium (LA) (Panel B; see Supplementary material online, Video S1), without vegetations. The tentative diagnosis was confirmed by transoesophageal echocardiography (Panels C–E; see Supplementary material online, Video S3) and by cardiac angio-computed tomography (CT; Panels F and G). A fused single-photon emission computed tomography/CT scan showed pathological uptake at the LVOT suggestive of infection.

The results of non-invasive diagnostics corresponded perfectly to the intraoperative findings (Panel H). Eight millimetres below the aortic valve, an LVOT/LA 10 mm long fistula with a diameter of 6 mm was visualized after atrial incision. The flailing tissue was resected from atrial access and followed by a direct continuous suture reinforced with pledgeted mattress sutures. Tissue cultures resulted positive for *Listeria*. The patient recovered without periprocedural complications.

To our knowledge, this is the first case described of a non-valve *Listeria* endocarditis complicated with intervalvular fibrosa rupture, and LVOT/LA fistula.

Supplementary material is available at *European Heart Journal* online.

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