

Gerbode Type Defect in Adults after Repair of Tetralogy of Fallot

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Background: Left ventricular (LV) to right atrial (RA) communications can be congenial or acquired. They are well known in patients with repaired atrio-ventricular septal defect and are increasingly recognized in adults with acquired heart disease. LV to RA communications or Gerbode-type defects (GD) are poorly recognized in adults with tetralogy of Fallot (TOF).

Objective: The objective was to assess the prevalence and the clinical features of the GD in a contemporary cohort of adults with repaired TOF.

Methods: Adults (≥18 years) with repaired TOF, actively followed at the Toronto Congenital Cardiac Center for Adults (n=502) and at the Congenital Cardiac Clinic, Rambam Medical Centre Haifa, Israel (n=24) were included. Their charts were reviewed for the diagnosis of a GD and acquisition of the anatomic features and surgical details.

Results: A GD was identified in 9 of 526 (1.7%) patients. The GD was adjacent to the ventricular septal defect (VSD) patch and was not hemodynamically relevant in all patients. Though present for many years or since surgical repair, the GD was diagnosed late after TOF repair and misinterpreted as high velocity jet of tricuspid regurgitation, which led to the incorrect diagnosis of an elevated right ventricular systolic pressure.

Conclusions: The presence of a Gerbode-type defect is a rare complication in adults with repaired TOF. Detection of a GD is a diagnostic challenge and a potential source of misinterpretation, which results in misdiagnoses.