

Direct heart shunt

Moses et al., report a complex case of an 18-year-old male with a history of hydrocephalus secondary to [intraventricular hemorrhage](#) of prematurity, with more than 30 previous shunt revisions, who presented to the authors' institution with [shunt malfunction](#). After exhausting his peritoneal cavity and pleural space as possible distal sites of shunt placement, he underwent a direct heart shunt placement when it was discovered he had thrombosis of his subclavian vein precluding a standard wire-guided atrial cannulation. His course was complicated by postoperative distal catheter migration and repeat surgery for reimplantation of the shunt directly into the atrium. At the 16-month follow-up visit, the patient showed no symptoms of shunt malfunction or pericardial effusion. Imaging studies demonstrated a functioning shunt system. This is the second reported successful ventricle to direct heart shunt placement in an adult. The authors report on the technical aspects of the case and review the relevant literature ¹⁾.

2009

A 35-year-old woman who underwent shunt placement at birth for [myelomeningocele](#). She had previously undergone more than 30 shunt revisions, with placement of the distal catheter in the peritoneum multiple times, and also in the pleura, the gall bladder, and the upper venous system. All shunts had failed and the possible placement sites were now anatomically hostile. A median sternotomy was performed as the next option. The catheter was placed directly into the appendage of the right atrium and secured with a pursestring suture. One month postoperatively, the patient presented with a large pericardial effusion after the distal catheter migrated out of the atrium and into the pericardial space. A repeat sternotomy was performed to drain the pericardial CSF collection. The catheter was reinserted into the atrial appendage, and a tunnel was created in the atrial wall to fix the device more securely. At 1 year postoperatively, the patient had no further symptoms of shunt obstruction or cardiac tamponade, and imaging studies suggested that the shunt system was functional. The authors report the first successful ventricle to direct heart shunt in an adult.

¹⁾

Moses ZB, Ozpinar A, Abd-El-Barr MM, Quinonez LG, Emani SM, Goumnerova LC. Direct heart shunt placement for CSF diversion: technical note. J Neurosurg Pediatr. 2016 Dec;25(6):663-666. PubMed PMID: 27589597.

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