

Contegra Infection. Case Report

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Abstract

The Contegra bovine jugular conduit is commercially available for nearly a decade to be considered the ideal substitute for the right ventricular outflow (RVOT).

But besides the higher incidence of distal anastomotic obstruction reported on midterm follow-up, the infectious disease should be considered. We present a child with Contegra graft infection after Fallot reconstruction. Emergency surgery consist in drainage abscess but graft was not removed. After surgery conservative therapy was our option against the surgical option cause the absence of dehiscence and good integrity of the graft.

Keywords: Contegra; RVOT; Obstruction; Contegra Graft Infection

Case Report

Female 2 years old from Pediatric Cardiology Service with high pressure gradient in the outflow of the right ventricle in the echocardiography (Image 1) after Fallot reconstruction. However, Echocardiography findings without significant pressure gradient one year ago. More imaging tests are needed (vascular CT scan) and it exists a suspicion of ventricular pseudoaneurysm (Image 2).

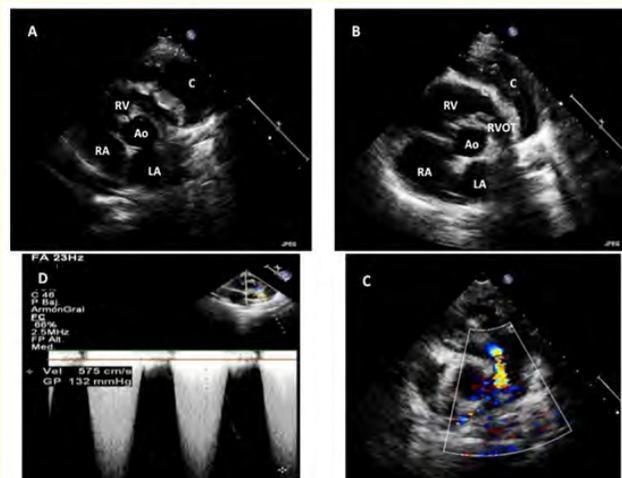


Image 1: Echocardiography: A and B) Short axis view at the level of the right ventricular outflow tract (RVOT). Great collection (C) in the anterior wall of the right ventricle (RV) with obstruction of the RVOT that is seen with color aliasing (C) and measured with continuous Doppler wave that shows a severe obstruction D).

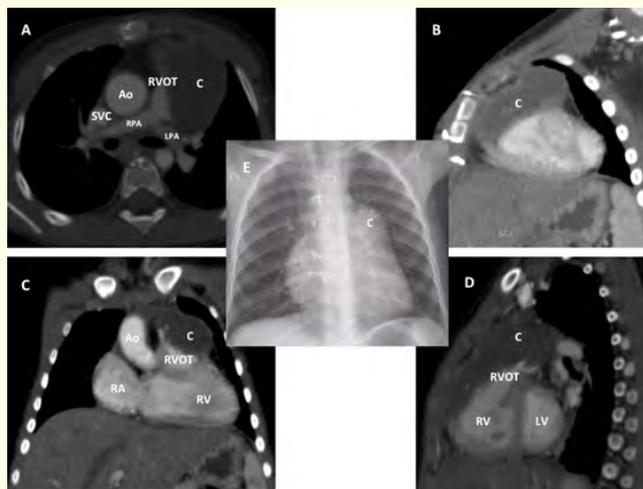


Image 2: Vascular CT Scan and Chest X-Ray: A) Cranial view visualizing big collection (C), located in the anterior wall of the right ventricle (RV) and directed cranially towards the right ventricle outflow tract (RVOT) with a severe obstruction. B and D) Sagittal view, with the big collection (C). C) Coronal view with the collection and its correlation with the chest X-Ray (E).

RA: Right Atrium; RV: Right Ventricle; C: Collection; RVOT: Right Ventricle Outflow Tract; Ao: Aorta; SVC: Superior Vena Cava; RPA: Right Pulmonary Artery; LPA: Left Pulmonary Artery.

In the surgery time we do not appreciate any point in the suture line, dehiscence or bleeding around Contegra®, on the right ventricle, infundibulum and pulmonary trunk. Loads of purulent stuff is cleaned and we check the inflammatory aspect of the ventricular walls. Cause the absence of current or acute infectious semiology of the patient, the findings are interpreted as a cold abscess in the context of possible past infection on the Contegra® patch. Contegra graft was not replace by a homograft or other patient.

After surgery initially discrete febricula (maximum 37.7°C). On treatment with Meropenem, Clindamycin and Linezolid intravenous cause the finding of purulent material in the surgery (95% neutrophilia). Other Analytical findings: PCR 125 mg/L and PCT 0.79 ng/ml.

Microbiology test confirms *Staphylococcus epidermidis* in the cardiac access tissue and *Staphylococcus hominis* in the swab test.

In the follow-up two years later there no more complications so in this moment we can say conservative therapy was successful.

Discussion

Bovine jugular vein conduit (Contegra, Medtronic inc. Mineapolis, MN, USA) is routinely used in congenital cardiac surgery reconstruction . Clinical results are controversial: stenosis, insufficiency, infection. Albanesi [1] evaluate incidence and predictive factors for contegra graft infection. Incidence rate of infection in the swiss team was 11.3% in 106 patients with Contegra graft implanted for several procedures: Ross procedure (n = 46), isolated pulmonary valve replacement (n = 32), tetralogy of Fallot (n = 24), double-outlet right ventricle (n = 7), truncus arteriosus (n = 4), switch operation (n = 1) and redo of pulmonary valve replacement (n = 2).

Furthermore, this entity presents a complex differential diagnosis with ventricular pseudoaneurysm. The study of clinical status, images from echocardiography (Image 1) and images from radiology (Image 2) will be fundamental.

Conclusion

Contegra graft infection may be considered as a frequent entity. The diagnosis may be complex and echocardiographic and radiological

images will be fundamental. In most of the pediatric cardiac team surgical treatment was the therapy of choice. However conservative therapy is an alternative option. We need to study and identify risk factors that help us choose the right option.

Conflict Of Interest

There are no financial or any other conflict of interest for this article, for any of the authors.

Bibliography

1. Albanesi F, *et al.* "Incidence and risk factors for Contegra graft infection following right ventricular outflow tract reconstruction: long-term results". *European Journal of Cardio-Thoracic Surgery* 45.6 (2014): 1070-1074.

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