

Percutaneous Fenestration Closure using the Amplatzer Ductus Occluder II (ADO II)

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INTRODUCTION

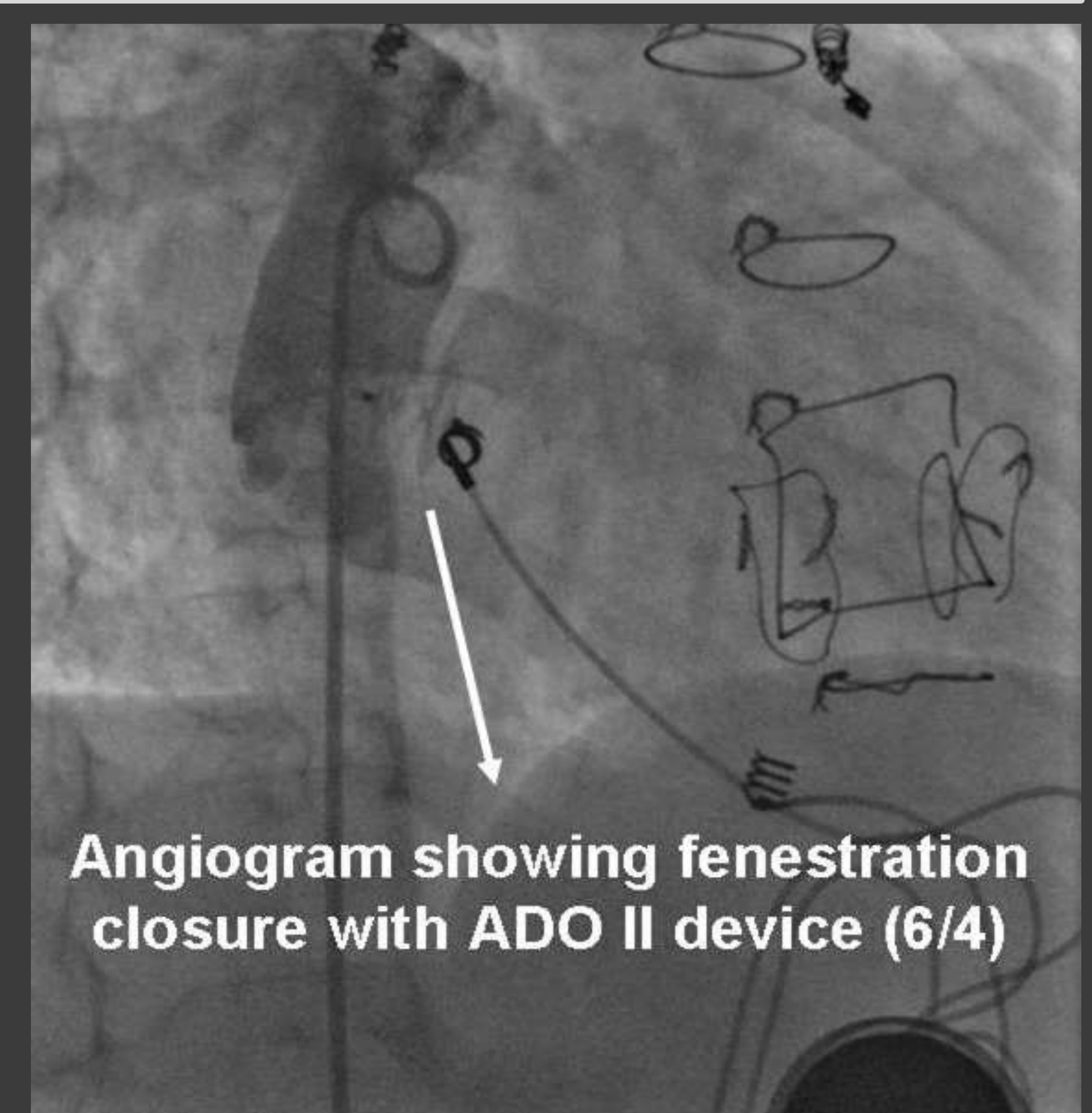
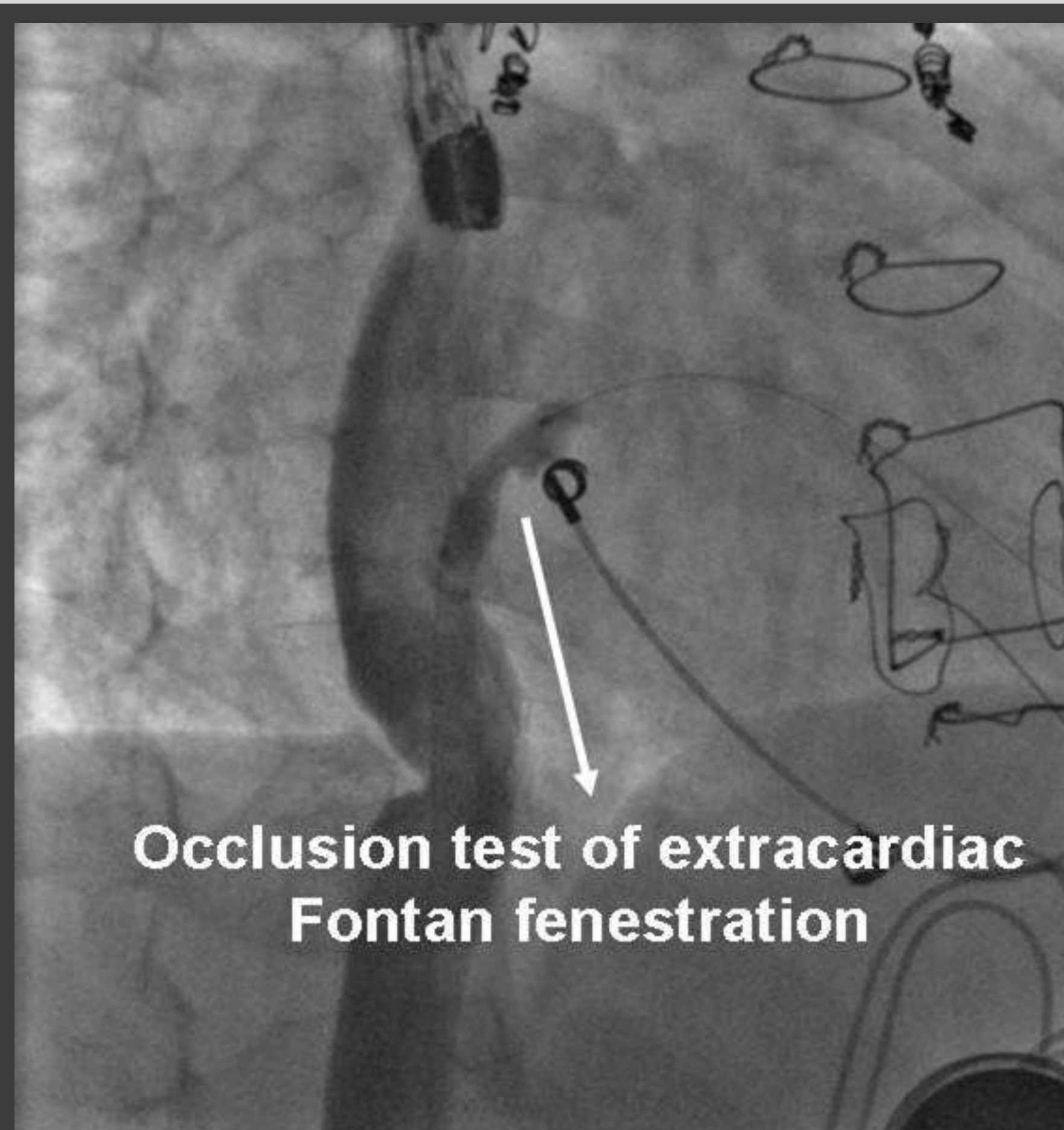
In the late 60's Fontan/Baudet described the basis for the procedure that became the final palliative surgery for single ventricular lesions. A relevant number of changes have been added to the classical operation, such as Fontan baffles fenestration. With the aim of improving O₂ saturation and withdrawing anticoagulation, percutaneous fenestration closure in patients with a stabilized chronic hemodynamic situation became a routine procedure in many centers. To this purpose, many different devices have been used.

AIM

Evaluate the efficacy/safety of the ADOII for Fontan fenestration occlusion.

METHODS

Retrospective review of medical records of all patients undergoing fenestration closure after Fontan procedure in the last 3 years. Each patient had complete right and left heart catheterization and fenestration test occlusion with a Tyshak Mini Balloon, to assess hemodynamic suitability for closure (conduit pressure <15mmHg); defect size was determined by transesophageal echocardiography.



RESULTS

22 FONTAN FENESTRATIONS CLOSED WITH ADO II

PATIENTS

Age: Mean: 7yrs (5-18yrs) **Weight:** Mean: 25Kg (18-81 kg)

Fontan Circuit:
 10 Extracardiac conduit / 12 Intracardiac Lateral Tunnel

Time Fontan Surgery - Fenestration Closure:
 Mean: 1 Year (8 months-5yrs)

BALLOON OCCLUSION TEST

Pre Test Mean Pressure in Fontan Circuit:

Mean: 10.4 mmHg (6-15mmHg)

Post Test Pressure:

Mean: 11.7 mmHg (8-15mmHg)

Mean PaO₂ Increase (FiO₂ <40%)

Mean: 51.8mmHg (Range:17-92 mmHg) (*p*<0.001)

COMPLICATIONS

Short Term Complications

No Long Term Complications

Device protrusion (N=1)

- Retrieval of ADO II;
- Covered stent Implantation

Immediate Residual Shunts (N=11)

100% Spontaneously Resolved

CONCLUSION

ADO II device can be used safely and successfully in Fontan fenestration percutaneous closure. Its low hemodynamic profile favours its easy implantation without significant protrusion on both sides (conduit and atrial chamber).