Stenting In Aortic Interruption [ Functional Aortic Atresia ]

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Background

- Aortic interruption or atresia results in complete loss of anatomical and luminal continuity between the ascending and descending thoracic aorta.
- Usually diagnosed in newborn babies following spontaneous closure of PDA and requires urgent surgical repair
- It may be diagnosed rarely in an adult patient
- Represent functional atresia due to severe and longstanding coarctation of the aorta.
- This type of aortic interruption is a challenge and is usually treated surgically to establish aortic continuity
Ain Shams Experience

- 5 cases [3 males and 2 females]
- 10-59 years
- Presentation
  - 3 with chest pain and discovered during coronary angio – All were hypertensive
  - 2 with uncontrolled hypertension
  - Both females were married and had children [30 and 55 years]
- All had successful stenting to establish aortic continuity using CP covered stents
- Procedure time ranged from 76-139 min [average 109min]
Chest X-ray:

MSCT
Technique

• Access
  • Right femoral and left or right brachial
  • Brachial access- 5 mg verapamil, 100µ Tridil
  • 100 units/kg Heparin – ACT > 200

• 30 years old female married with 2 children presenting with uncontrolled hypertension
• Diagnosed as CoAo with interruption
• Referred for stenting
Acess – right femoral –left brachial

Conclusion

• Percutaneous treatment of functional aortic atresia is feasible and a safe alternative to surgery with excellent immediate results
• Using PTCA wires is safe with minimal complications
• Requires a well equipped lab
• ? Time and radiation exposure [fluoroscopic acquisition]
• Life long follow up is required
CSI Africa 2018
Cairo, Egypt

November 30 – December 1, 2018

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