ASD Closure Using The Solysafe Device
Initial Experience
Ain Shams University

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Incidence

- 6–10% of all CHDs.
- Most common congenital heart defect diagnosed in adulthood.
- 75% seconum ASD
Indications Of Transcatheter Closure Of ASD
ACC/AHA Guidlines

Medscape

(a) Evidence of shunting (Qp/Qs > 1.5) and/or symptoms;
(b) Single defect;
(c) Defect smaller than 40 mm;
(d) Septal rims that are wide enough to hold the occlusion device (at least 4 mm);
(e) Pulmonary veins that drain back normally to the left atrium;
(f) Absence of any other defect(s) that require surgery (e.g., significant tricuspid regurgitation, etc.).

Source: J Invasive Cardiol © 2008 Health Management Publications, Inc.

ASO
Defect stenting with secondary thrombosis

Multi-Fenestrated Septal Occluder – “Cribriform”

Helex

StarFlex
Self centering double umbrella
ASD<20mm

Occlutech
Solysafe [ swissimplant ]

- Self-centering.
- Two foldable Polyester patches, attached to eight Phynox wires.
- Stretched device fits into 10F Introducer.
- In the defect, wire-holders are moved towards each other.
- Clicking mechanism keeps the wire-holders together.

Patient Selection- Initial TTE
Patient Selection - TEE

- Localization / sizing of the defect.
- Multiple defects / ASA
  Septal tissue quality.
- Measurement of the surrounding rims
<table>
<thead>
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<th>Device size (mm)</th>
<th>ASD size (mm)</th>
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<td>4-12</td>
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Technique
Ain Shams University
Initial Experience

- 11 patients 5 males, 6 females.
- Age 1.5 – 27 y mean = 8.5 years.
- Weight 10 – 48 Kgs mean = 23 kgs
- ASD 6 – 19 mm mean = 13.3 mm.
- Success rate 100% [selection?]

Dec 2008 – Jan 2010

Device size

Dec 2008 – Jan 2010

- Solysafe
- Occulotech
- Amplatzer

AGE

WEIGHT

Solysafe Occulotech Amplatzer
ASD / ASA
ASD / Small Ao Rim

Complications

- Stroke in one patient
- Thrombus formation on wire
- Managed by t-PA within the first 6 hours
- ACTs not checked
Complications

Advantages

- Smaller metal surface.
- Low profile
  - Retrievable at any stage until release.
  - Lead by a guide wire.
  - Delivered through short 10F sheath.
  - Manual control of the entire unfolding and placement of the two membranes.
- RA disc first
Disadvantages

- Stretching the defect.
- Difficult to use in patients with absent aortic rim.
- ? Thrombus formation on wire.
- Learning curve

Conclusions

- Solysafe device has a low profile and is suitable for closure of ASDs especially in children.
- Adequate heparinization with continuous check of ACTs.
- Experience.
Thank You