Status Of Endovascular Combined Device For Repairing Lesions Of The Ascending Aorta And The Aortic Valve: The Endo-Bentall Concept

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No financial Interest!

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YET...

I have a competitive and effective patent in the arena!

Yours Sincerely – Omaha 2007
Yours Sincerely – Los Angeles 2014

My disclosure: optimist!
Many aortic pathologies amenable to Endo-Bentall?
Not currently! But most probably soon!

Advances in Endovascular Treatment of the Ascending Aorta
- most common technology: off-label stent grafts
- increased overall experience
- most pathologies treated
- TAVR experience
- new devices involving arch
- better wires and catheters
- more imaging modalities used
- Hybrid room is standard of care!

First Physician-Sponsored IDE: Ascending Aortic Stent graft
National Co-PIs: White/Khoynezhad
Current PS-IDE Ascending Experience

- 48 patients with ascending TEVAR since 2006;
- 11 patients entered for the PS-IDE:
- one early mortality, no early open conversion
- 100% technical success (delivery and deployment)
- 1/14 stroke, 1/14 type Ia endoleak (same patient)
- open repair (FET operation) 2 months, death at 4 months
- two patients with late deaths at 4m and 16m
- mean follow-up of 29 months
- expansion to other centers in process!

Terminology: Wheat operation

Terminology: Endo-Wheat operation

Anatomic feasibility of an endovascular valve-carrying conduit for the treatment of type A aortic dissection

Terminology: Wheat operation

89 yo with post TAVR aortic dissection
Endo-Wheat

Terminology: Bentall operation

Endo-Bentall in PubMed

Endo-Bentall
- Still far away
- multiple IPs, first IDE devices within next 5 years
- need reliable TAVR and ascending TEVAR stent graft

The (near) Future of the Aortic Root Operations
1) Bentall/David hemiarch
2) Bentall/David accommodating zone 0 TEVAR
3) Endo-Bentall
4) Endo-Bentall accommodating zone 0 TEVAR

Conclusions
- Endovascular treatment for the ascending aorta is here!
- Multiple companies and our PS-IDE with acceptable or promising early results
- Endo-Wheat is feasible!
- Many technical challenges still to be tackled for Endo-Bentall!
- 2/3 of type A dissections are candidates for Endo-Bentall
- Long-term follow-up is needed!
Thank you!