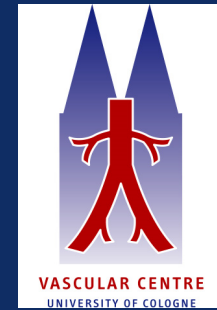


UNIVERSITY HOSPITAL
COLOGNE



My planning for arch chimneys

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Japan

Eur J Cardiothorac Surg. 2015 Mar 1. pii: ezv063. [Epub ahead of print]

Hybrid versus open repair of aortic arch aneurysms: comparison of postoperative and mid-term outcomes with a propensity score-matching analysis.

Tokuda Y¹, Oshima H², Narita Y², Abe T², Araki Y², Mutsuga M², Fujimoto K², Terazawa S², Yagami K², Ito H², Yamamoto K³, Komori K³, Usui A².

Author information

Abstract

OBJECTIVES

METHODS:

Open arch repair (HAR) versus hybrid arch repair (HAR) with or without extensive aneurysmectomy were compared.

RESULTS:

The need for CPB (P = 0.0022) and hospital mortality (P = 0.0022) and hospital mortality (P = 0.0022) and hospital mortality (P = 0.0022) were significantly lower in the HAR group (0.0% vs 2.6%, P = 0.0022).

Mortality
Open 0%
Hybrid 2.6%

is.
isolated hybrid arch
A dissection or
arch repair groups
(21 vs 4.8%, P =
lowering propensity
mortality rate (2.6 vs
as no apparent
m from aortic events

CONCLUSIONS: HAR achieves equivalent short-term results to standard open arch repair, with a decreased need for CPB. However, considering the inferior mid-term outcomes of this procedure, its indications should be limited to high-risk patients.

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KEYWORDS: Aortic arch aneurysm; Hybrid arch repair; Thoracic endovascular aortic repair



Europe

Eur J Cardiothorac Surg. 2015 Feb 19. pii: ezv024. [Epub ahead of print]

Aortic arch aneurysm: short- and mid-term results comparing open arch surgery and the hybrid procedure†

Cazavet A¹, Alacoque X², Marcheix B³, Chaufour X⁴, Rousseau H⁵, Glock Y³, Leobon B³.

Author information

Abstract

OBJECTIVES

operative tech
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METHODS: F

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Aneurysms of
were no patier

RESULTS: Th

similar at 20%
comparable at
56.3 months fo
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interval: (0.06-

CONCLUSIO

short- and mid
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© The Author

Mortality

Open 20%

Hybrid 19%

Stroke

20%

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Metaanalysis - Aortic Arch Hybrid Repair (n=14 studies between 1998-2010)

	Patients N
Total Arch Repair (Zone 0)	130
Partial Arch Repair (Zones 1-2)	131
p value	

Kotelis D, Böckler D et al , JVS 2011, August

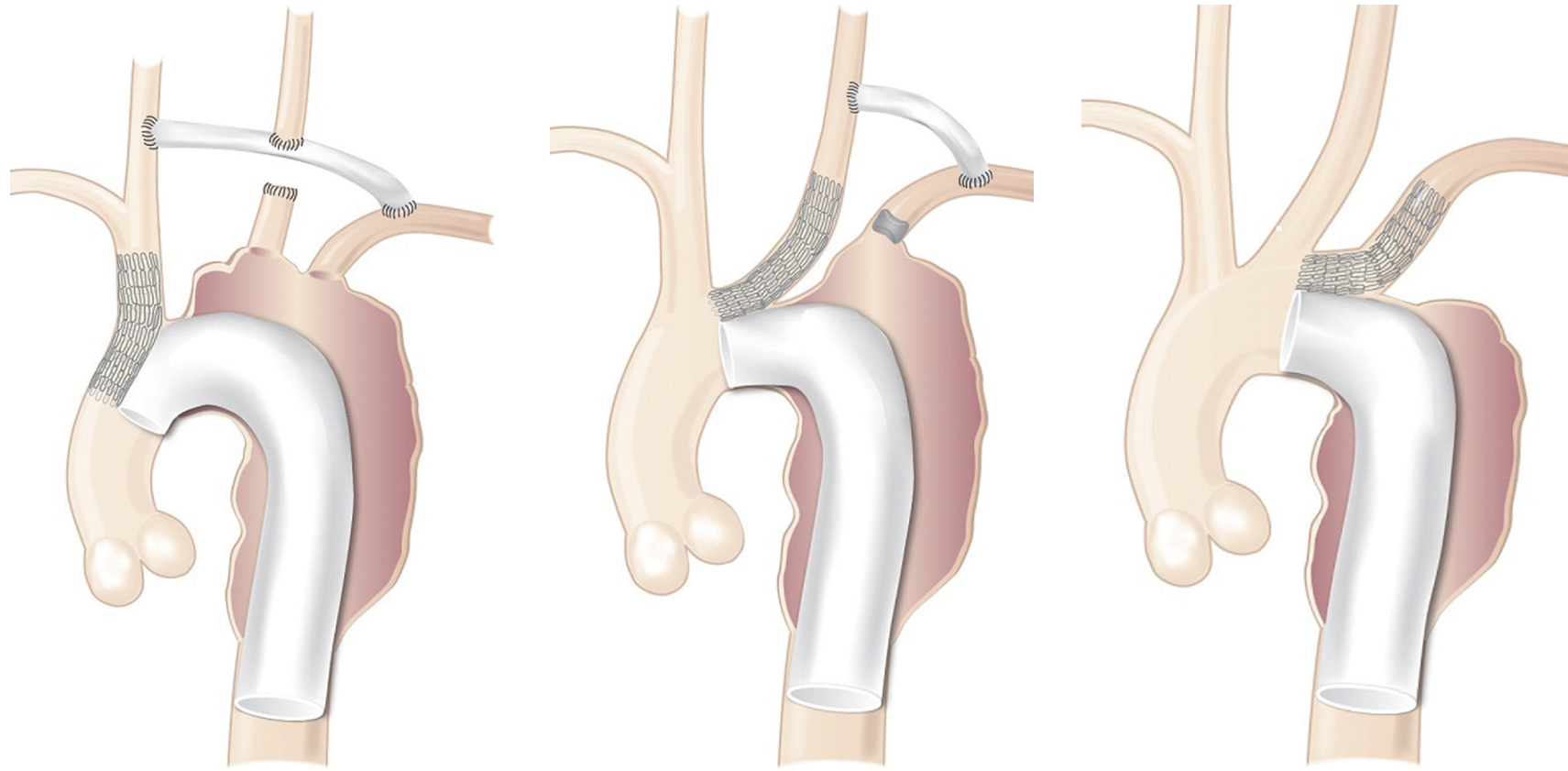


Mortality and Stroke in Arch TEVAR/OPEN

Year	Author	N	Stroke	Mortality	Type
2011	Geisbüscher	47	6.3	19	Hybrid
2010	Antoniou	195	7	21	Hybrid
2007	Melissano	14	14	14	Hybrid
2008	Sundt	347	8.4	9	Open
2000	Yagdi	144	8.7	19	Open
2000	Shiia	52	2	12	Open
1996	Yamashita	38	10	21	Open



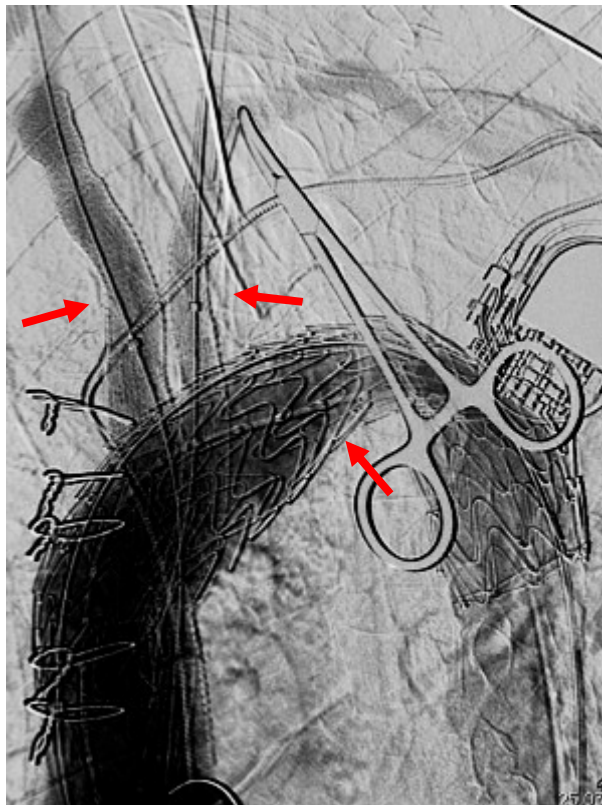
Chimney-technique



Cires et al. *J Vasc Surg* 2011



Triple-Barrel Technique





Planning

Ascending aorta (prox. Landingzone)

1. <math><42\text{mm}</math> in \emptyset
2. 50 mm to the coronaries



Planning

Brachiocephalic trunk

1. <20-22mm in \emptyset
2. Length >20mm

Left CCA

1. Normally not a problem 6-10mm in \emptyset
2. Length always sufficient



Planning

Left subclavian artery

1. Normally not a problem 6-10mm in \emptyset
2. Length to the left vertebral artery



Material

- Gore CTAG®
- Excluder® limbs for the brachiocephalic trunk
- Ø 16-24mm L 10 cm
- Viabahn® for the left CCA and the subclavian artery
- Ø 10mm L 5-10 cm



Procedure

Cutdown

Right subclavian artery

Left common carotid artery

(left subclavian artery)

Right femoral artery



Procedure cont'd

Stiff guide (Lunderquist) wire in the aorta

Introduction of the CTAG®

Puncture right subclavian artery

12 F sheath (standard wire)

Puncture left CCA

12 F sheath (standard wire)



Procedure cont'd

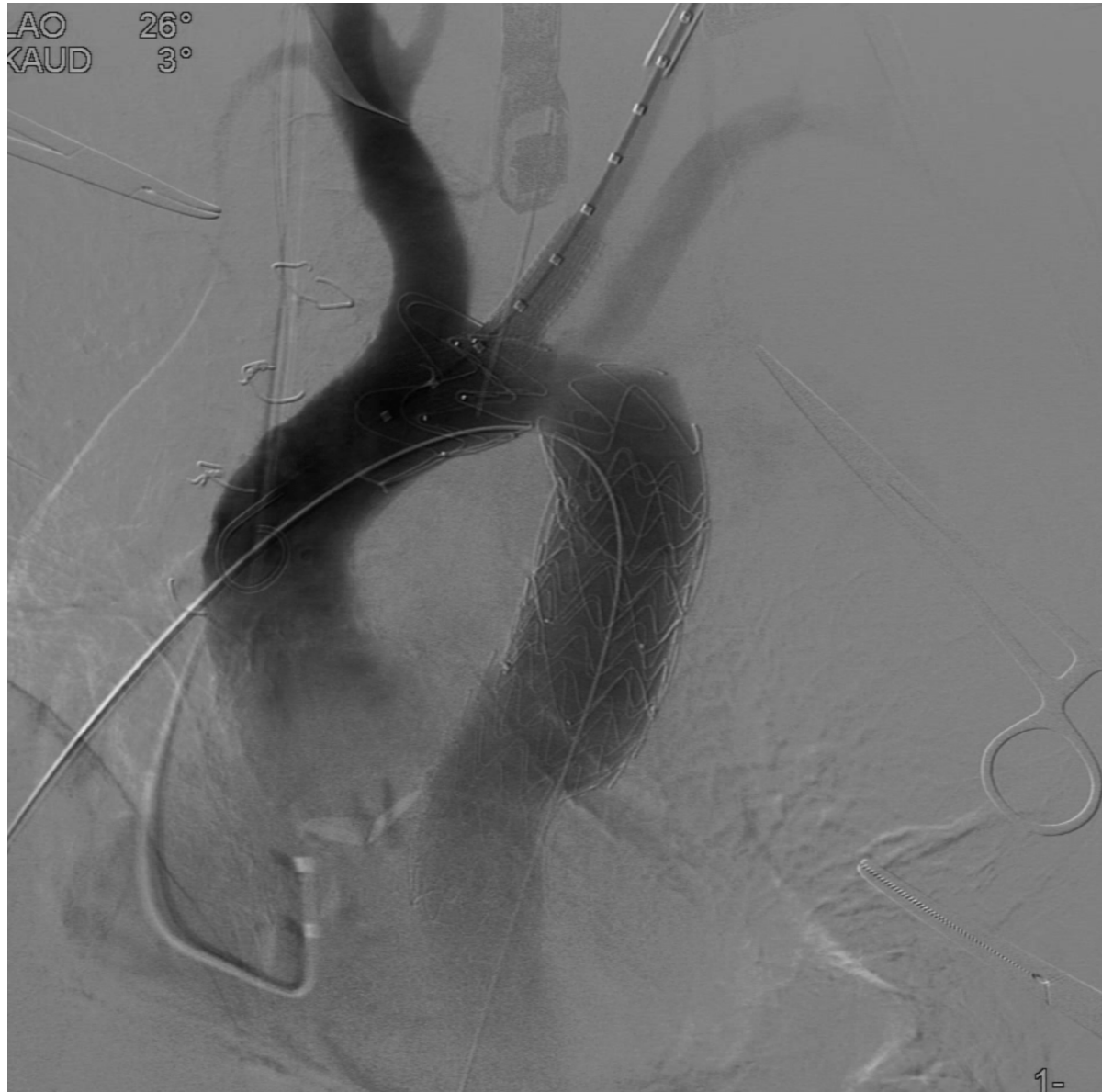
Introducing the chimneys

Rapid pacing

Release of the CTAG 1-2 seconds prior to the chimneys (2 man-job)



Control angiography





WL: 304 WW: 270





Literature review



Ann Cardiothorac Surg. 2013 May; 2(3): 339–346.

PMCID: PMC3741865

doi: [10.3978/j.issn.2225-319X.2013.05.14](https://doi.org/10.3978/j.issn.2225-319X.2013.05.14)

The chimney-graft technique for preserving supra-aortic branches: a review

[Konstantinos G. Moulakakis](#),^{1,2} [Spyridon N. Mylonas](#),^{1,2,3} [Ilias Dalainas](#),¹ [George S. Sfyroeras](#),¹ [Fotis Markatis](#),¹
[Thomas Kotsis](#),³ [John Kakisis](#),¹ and [Christos D. Liapis](#)¹



Literature review Chimneys

124 patients

136 Chimneys



Results

n	Mortality	Stroke	EL	EL type 1
124	4 %	4.8%	19%	10%

Moulakakis et al. 2013



Arch Chimney Technique

Feasible

All supra-aortic vessels can be vascularized



Advantages:

Cheap

Emergency or after
Sternotomy

Short OP-Time

Acceptable results

Drawbacks

“Gutter” Endoleak

Retrograde type A
dissection?



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Thank you very much for your attention

