



Congenital Heart Disease

OUTCOMES FOR SURGICAL REPAIR OF KOMMERRELL DIVERTICULUM AND ANEURYSM

Poster Contributions
Poster Hall B1
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Background: Standard surgical management of Kommerell diverticulum (KD) and Kommerell aneurysm (KA) has not been established. We aimed to report our outcomes for surgical repair of KD and KA.

Methods: The Mayo Clinic surgery database was retrospectively analyzed to identify pts with aberrant subclavian artery (ASA) operated on from 1990-2014. Surgical and clinical data were reviewed.

Results: Surgical type and follow-up data are shown (Table). 863 pts with ASA were identified; 121 had KD and 28 had KA. Surgical repair was undertaken in 37 pts (25 with KD; 12 with KA). Carotid-subclavian transposition was the preferred technique for KA repair, nearly 70% had concomitant surgical arch intervention. Ligamentum arteriosum resection was more frequently employed in pts with KD alone (80%). Postoperative complications occurred in 19% (Table). There was one postoperative death (cardiac arrest). 5-year survival was 100% in pts with KD and 75% for pts with KA. At early and late follow-up, 89% and 79% of pts respectively had improvement of presenting symptoms.

Conclusion: This is the largest study on outcomes of surgical repair of KD and KA. Carotid-subclavian transposition was the preferred technique for aneurysm repair. Surgical repair of KD and KA can be successfully undertaken resulting in symptomatic improvement with low mortality and morbidity.

	All pts (n = 37)	KD alone (n = 25)	KA (n = 12)	p
Surgery				
Carotid-subclavian transposition*	11 (30%)	4 (16%)	7 (58%)	0.01
Partial arch replacement	5 (14%)	1 (4%)	4 (33%)	0.03
Total arch replacement	1 (3%)	0 (0%)	1 (8%)	NS
No arch intervention	5 (14%)	3 (12%)	2 (17%)	NS
Aorto-subclavian intervention	4 (11%)	0 (0%)	4 (33%)	0.007
Bypass	3 (5%)	0 (0%)	3 (25%)	0.03
Re-implantation	1 (3%)	0 (0%)	1 (8%)	NS
Aneurysmorrhaphy	2 (5%)	1 (4%)	1 (8%)	NS
Ligamentum ligation	20 (54%)	20 (80%)	0 (0%)	0.0001
Surgical approach				
Lateral thoracotomy	36 (97%)	25 (100%)	11 (92%)	NS
Median sternotomy	1 (3%)	0 (0%)	1 (8%)	NS
Follow up				
Postoperative				
Complications	7 (19%)	5 (20%)	3 (33%)	NS
Phrenic/laryngeal nerve injury	3 (8%)	1 (4%)	2 (17%)	NS
Chylous effusion	3 (8%)	3 (12%)	0 (0%)	NS
Dissection	2 (5%)	1 (4%)	1 (8%)	NS
Stroke	0 (0%)	0 (0%)	0 (0%)	NS
Death	1 (3%)	0 (0%)	1 (8%)	NS
Early follow-up				
Improvement in symptoms	32 (89%)	22 (88%)	10 (91%)	NS
Reintervention	1 (3%)	1 (4%)	0 (0%)	NS
Death	0 (0%)	0 (0%)	0 (0%)	NS
Late follow-up				
Improvement in symptoms	27 (79%)	20 (80%)	7 (78%)	NS
Reintervention	1 (3%)	1 (4%)	0 (0%)	NS
Death	2 (5%)	0 (0%)	2 (17%)	NS

KD, Kommerell diverticulum; KA, Kommerell aneurysm
*, 5 pts with two step surgical approach (3 KA, 2 KD).