



UNIVERSITY HOSPITAL
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The rate of bovine arch among dissection patients

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I have the following potential conflicts of interest to report:

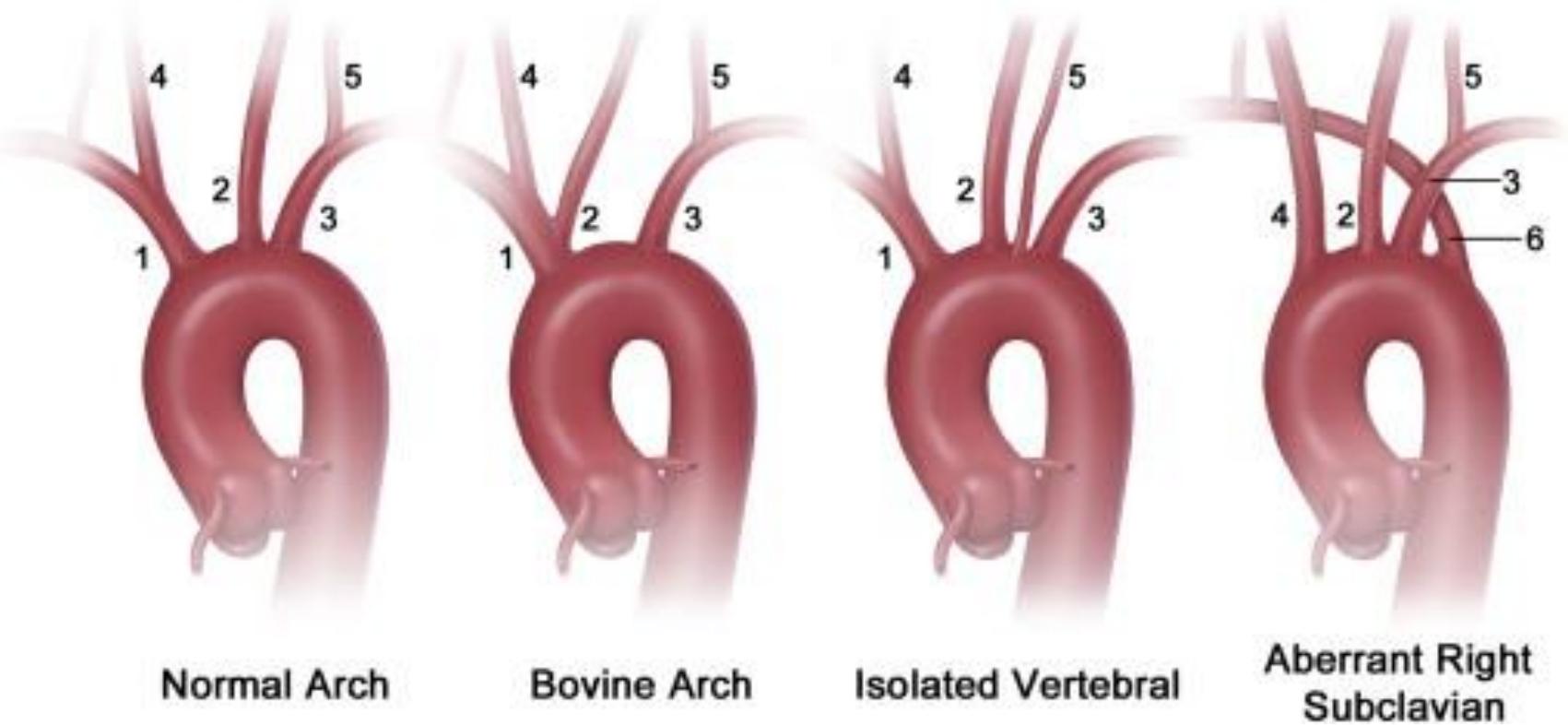
- Consulting
-
- Gore, Vascutek, Jotec
- Employment in industry
- Shareholder in a healthcare company
- Owner of a healthcare company
- Other(s)

I do not have any potential conflict of interest



Bovine arch might be accomplished with a higher incidence of Type B dissections than the normal aorta

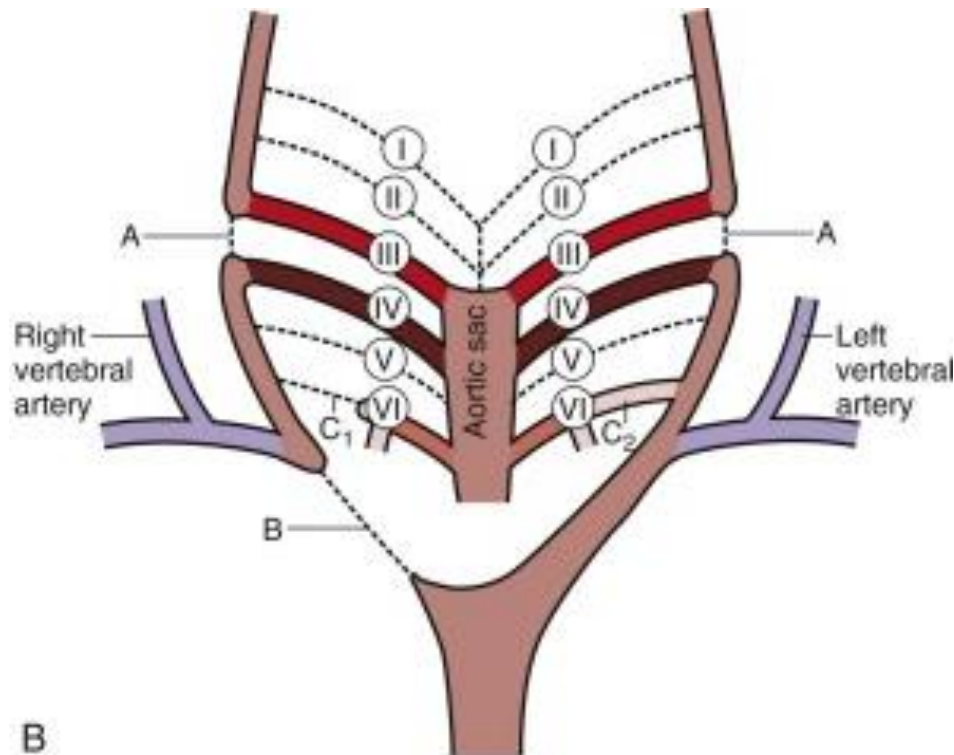
A bovine arch may intrigue the landing Zone in TEVAR



Atypical aortic arch branching variants: A novel marker for thoracic aortic disease

Julia Dumfarth et al, The Journal of Thoracic and Cardiovascular Surgery, Volume 149, Issue 6, 2015, 1586–1592

AORTIC ARCH DEVELOPMENT

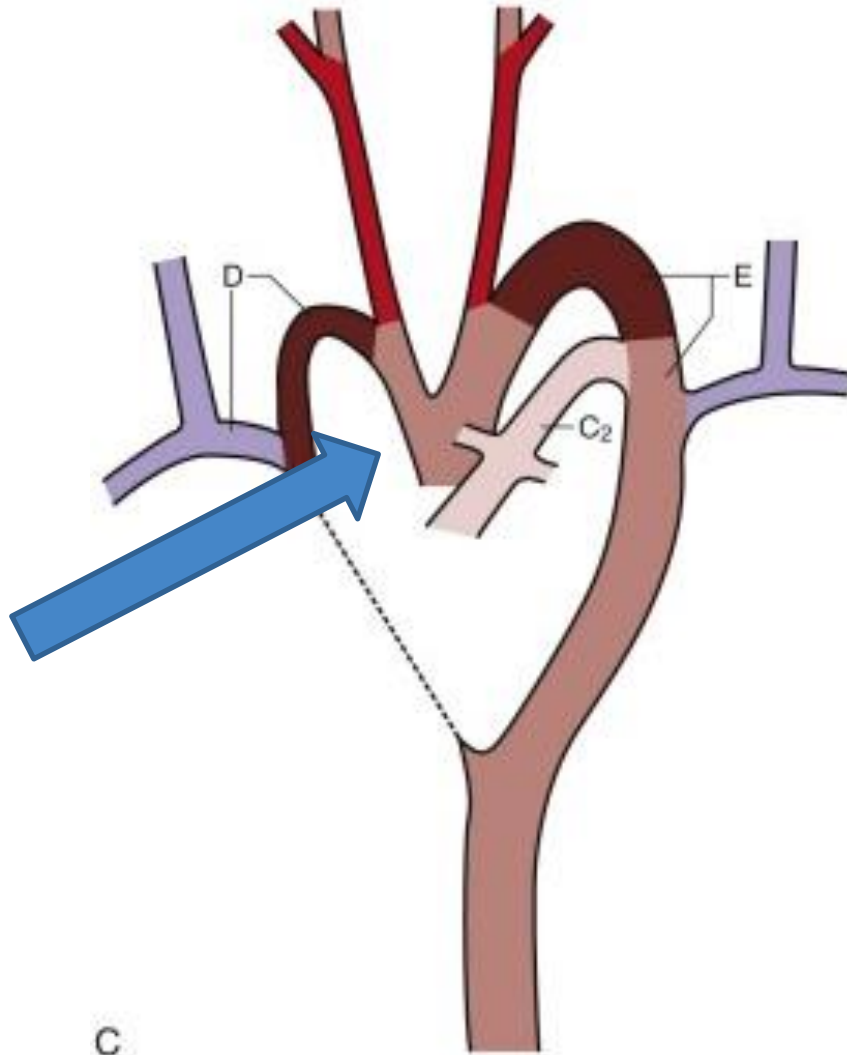


The paired first, second, and fifth aortic arches and the distal section of the right sixth arch disappear .
The dorsal aorta on each side between the third and fourth arches also disappears.

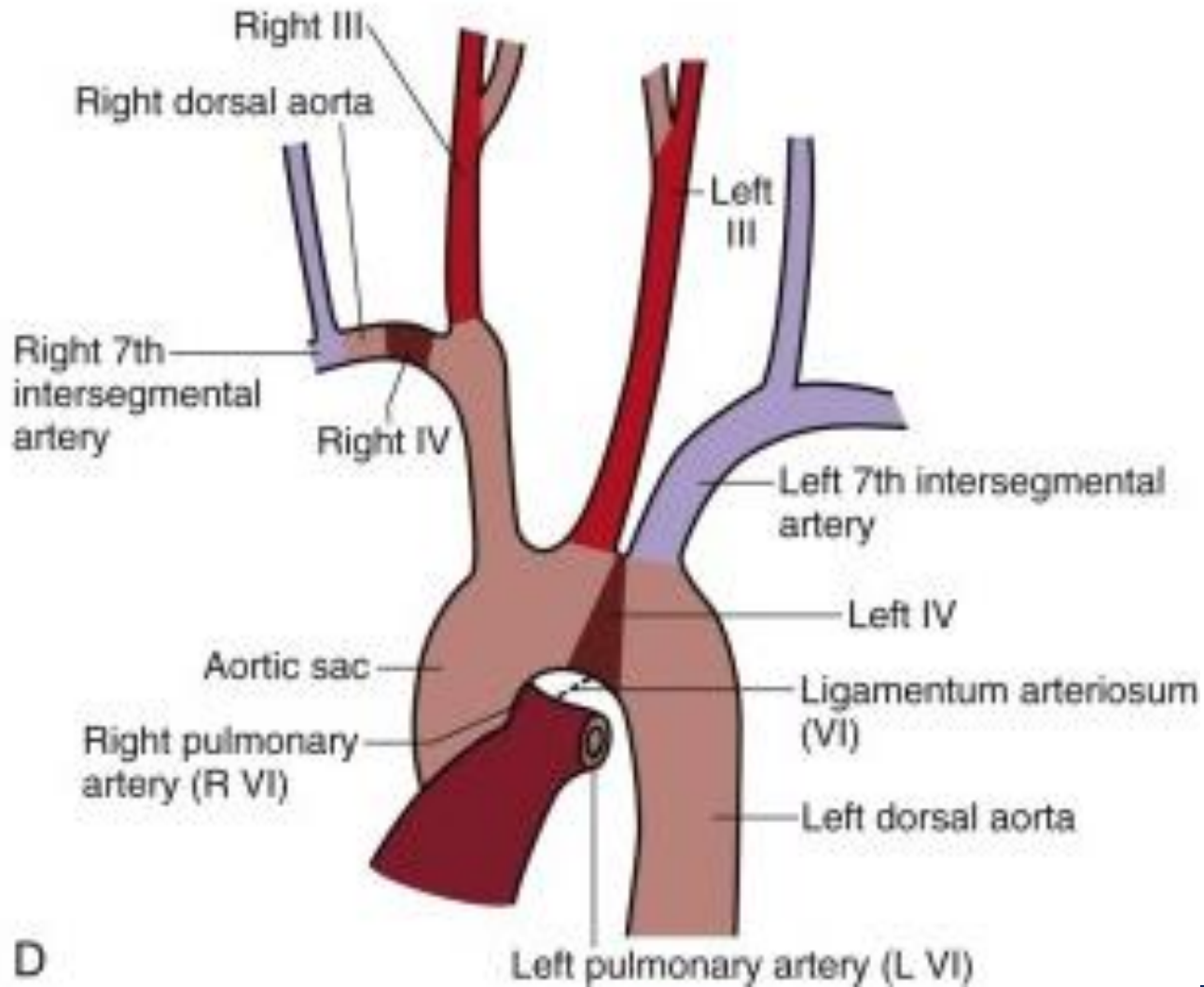
AORTIC ARCH DEVELOPMENT

The left fourth arch and the left dorsal aorta distal to it dilate and become part of the aortic arch.

The “bovine arch” can be seen as a stopped evolution



AORTIC ARCH DEVELOPMENT





METHODS

The last 100 patients with a type B Dissection in a consecutive series were investigated with respect to

Rate of “bovine arch”

The curvature of the arch

Distance between ascending and descending aorta at the level of the pulmonary artery

Compared to 110 patients having a CT for other reasons (staging in malignant disease)



Cologne Data

	Control	Type B dissection	P-value
n	110	100	
Median age	61 (32-84)	61 (22-83)	n.s.
Bovine Arch	19 (17.8%)	18 (18%)	n.s.
Arch Curvature	5,35 cm	5,56 cm	n.s
Females	38 (34%)	28 (28%)	n.s



Rate of Bovine Arch (BA) in literature

Author	Year	N	Country	Modality	BA diss	BA Aortic disease	BA control
Natsis	2009	633	Greece	DSA			14.9%
Hornick	2012	1456	US	CT	(15%)	26%	16.2%
Celikyay	2013	1136	Turkey	CT			21.1%
Wanamaker	2013	355	US	CT	31%		19%
Pullas Tapia	2015	1050	China	CT	11.8		14.7%
Dumfarth	2015	5273	US	CT		24.6%	



Conclusions

The bovine arch can be seen a variant developing through variation in the embryologic phase of the humans

The rate of bovine aortic arch in type B dissection patients does not seem to differ from the rate in the normal population.

The rate in type A dissections is currently investigated



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Thank you very much for your attention





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