

How Would You Correct an Aberrant Right Subclavian Artery?

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(on behalf of the Editorial Office)

Key Words

Aberrant subclavian artery • Treatment approach

A 63-year-old female presented having suffered an embolic event to her right index finger. This resolved successfully with conservative treatment via development of collateral channels. The finger is fully viable, albeit mildly insensitive. She has had some dysphagia, with one specific choking episode when a lozenge became lodged in the esophagus, causing discomfort and cough until it dissolved spontaneously.

Work-up revealed an aberrant right subclavian artery, with associated Kommerell's dilatation and a 1 cm wide ulcerated area near its origin from the aorta, as well as an arteriosclerotic irregularity of the proximal subclavian artery. Passage of the aberrant subclavian artery behind the trachea and esophagus produced esophageal compression. See computed tomography (CT) scan images in [Figure 1](#).

The question regarding this case was:

How would you correct this lesion?

- Open surgery
- Intraluminal endovascular treatment
- Combined surgical-endovascular approach (hybrid operation) with right subclavian artery transposition and thoracic aortic stent graft implantation
- Other approach

The respondents who selected the open surgery option were asked:

Please indicate—open surgery to include which of the following (multiple choice question):

- Left thoracotomy for division of subclavian artery and, thus, interruption of vascular ring
- Neck approach for ligation of subclavian artery (to allow thrombosis of aberrant artery), with carotid to subclavian bypass for distal perfusion
- Ligation of thyrocervical trunk and internal mammary artery (IMA)
- Other

Selection of the “Other approach” option to the main question and the “Other” option to the secondary question prompted a text field where the respondents could describe their approach.

The poll was distributed among all current members of the Editorial Board, who were asked to submit their responses via an online survey tool. The list of Editorial Board members can be found the AORTA journal website (<http://aorta.scienceinternational.org>). The members of the Editorial Board whose practice does not lie within the scope of this question were asked to disregard this poll. Here we present the results of this poll.

Results of the “Poll the Editorial Board”

Thirty-three members of the Editorial Board submitted responses through our online survey tool. The results are presented in the pie chart of [Figure 2](#) and [Table 1](#).



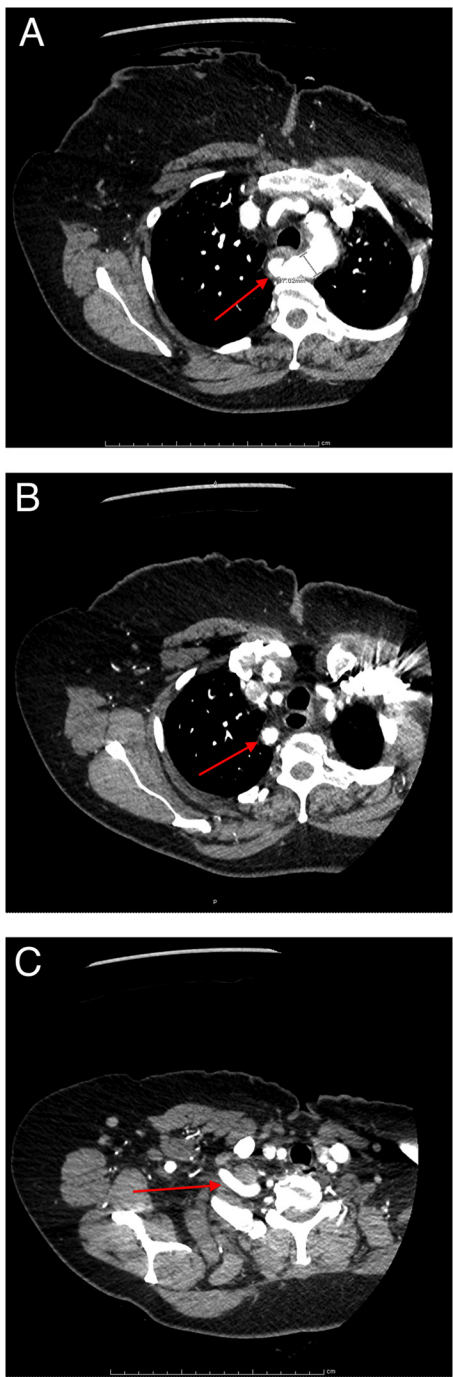


Figure 1. Axial CT scan images showing the aberrant right subclavian artery (red arrow).

Comment

The results of the poll show the increasing popularity of the hybrid procedures with the majority of the respondents (55%) indicating their preference

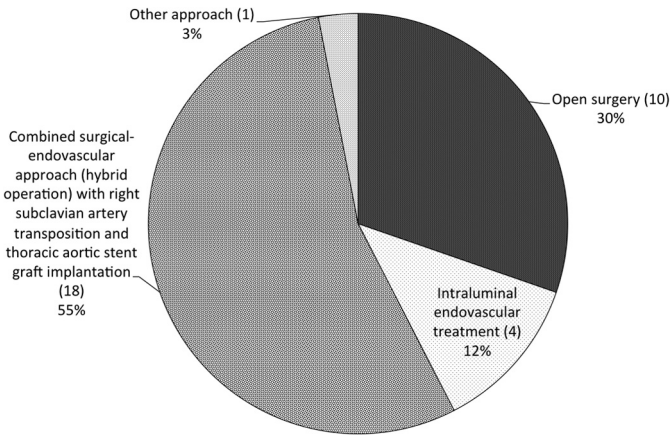


Figure 2. Pie chart diagram illustrating the responses of the Editorial Board members to the poll.

Table 1. Responses of the Editorial Board members (n = 10) that specified preference for open surgery (multiple choice question)

Preferred technique for open surgical treatment of an aberrant right subclavian artery	No. of votes	Percentage
Left thoracotomy for division of subclavian artery and, thus, interruption of vascular ring	7	70%
Neck approach for ligation of subclavian artery (to allow thrombosis of aberrant artery), with carotid to subclavian bypass for distal perfusion	4	40%
Ligation of thyrocervical trunk and IMA	0	0
Other	2*	20%

*The two respondents that selected the response “Other” indicated the following as their preferred technique for open surgery:
1 –Left thoracotomy, division of right subclavian artery, and connection to ascending aorta.
2 – (1) Medium sternotomy. (2) Suture of the aberrant artery at the level of its origin. (3) Ascending aorta—right subclavian bypass graft OR reimplant of distal right subclavian artery to the right carotid artery.

for the combined surgical and endovascular approach, 30% of the respondents selecting open surgery as their preferred technique, while 12% favored an intraluminal endovascular treatment approach. Interestingly, among the respondents that showed preference for open surgery, seven (70%) indicated the left thoracotomy approach to

be their preference. At the same time three (30%) respondents stated that the combined left thoracotomy and neck approach is their preference. Only one respondent (10%) selected the isolated neck approach for ligation of the subclavian artery with a carotid to subclavian bypass for distal perfusion, while no respondents showed preference toward ligation of the thyrocervical trunk and IMA. Two

respondents provided other alternative strategies for open surgical treatment (see [Table 1](#)).

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Cite this article as: Ziganshin BA. How Would You Correct an Aberrant Right Subclavian Artery? *Aorta* 2013;1(2):149–151. DOI: <http://dx.doi.org/10.12945/j.aorta.2013.13-026>