

## [短報] An Anomalous Case of the Right Subclavian Artery as the Last Branch of the Aortic Arch

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### SUMMARY

An anomalous case of the right subclavian artery was found in a Japanese cadaver during dissection practice at Chiba University School of Medicine in 1996. In this case, the right subclavian artery arose from the posterior wall of the aortic arch as its last branch, and ran rightwards between the esophagus and the vertebral column. This case belongs to type G of the Adachi-Williams-Nakagawa-Takemura classification of aortic arch branching patterns.

**Key words:** subclavian artery, aortic arch, variation, human

A case of the right subclavian artery as the last branch of the aortic arch was encountered in a Japanese male cadaver of 83 years old (No. 6-50) who had died of hepatoma. In this case, the following branches were found to arise from the aortic arch in this order: 1) the right common carotid artery, 2) the left common carotid artery, 3) the left subclavian artery, and 4) the right subclavian artery (Fig. 1). These branches arose independently and a bicarotid trunk was not seen.

The right subclavian artery arose from the posterior wall of the aortic arch. The external diameter of the artery at its origin was 15 mm. This artery ran rightwards and upwards between the esophagus and the vertebral column, making a depression on the posterior wall of the esophagus (Fig. 2). After giving off the right vertebral artery,

it bended rightwards taking the course of the normal subclavian artery. The course of the left subclavian artery was normal.

The right vagus nerve descended anteriorly to the right subclavian artery along the right side of the trachea (Fig. 2). The right recurrent laryngeal nerve was absent, but the corresponding branch arose directly from the vagus nerve. The course of the left vagus and that of the left recurrent laryngeal nerve were normal. The courses of the thoracic duct, the sympathetic trunk and the ligamentum arteriosum were also normal.

The present case belongs to type G of the Adachi-Williams-Nakagawa's classification [1-3] for the branching patterns of the aortic arch. Holzapfel [4] also classified anomalous cases of the right subclavian artery into 10 types. The present case belongs to type 5 of this classification. Recently, Takemura et al.

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松野義晴, 小宮山政敏, 嶋田 裕: 大動脈弓最終枝としての右鎖骨下動脈の1例

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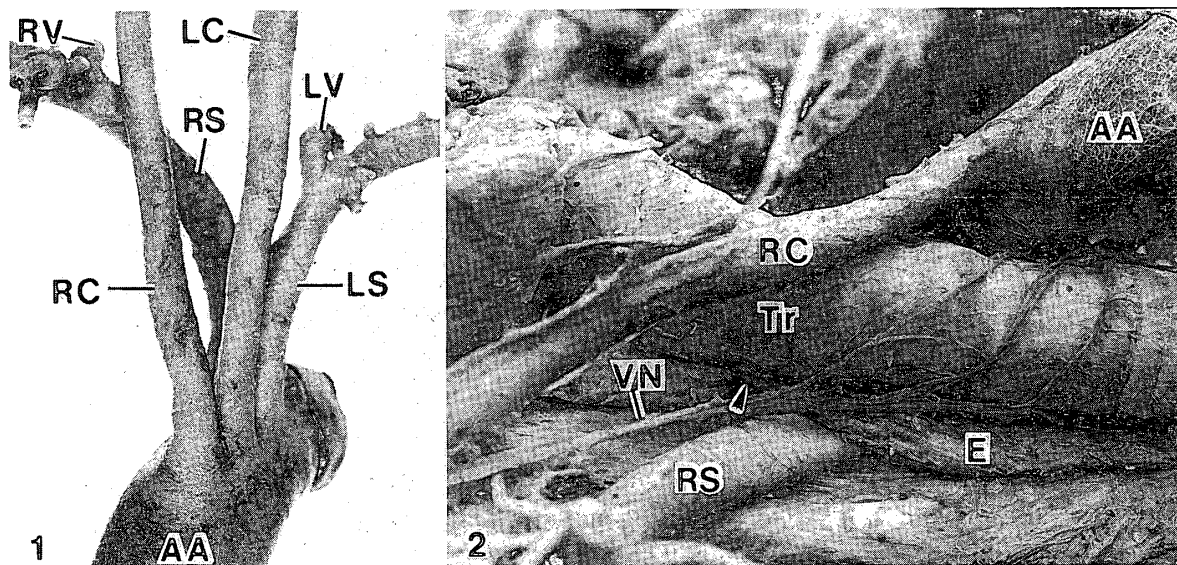


Fig. 1. Antero-superior view of the aortic arch. The right subclavian artery arose as the last branch of the aortic arch. Fig. 2. Antero-lateral (right side) view. The right subclavian artery ran behind the esophagus causing a depression (arrowhead) on the posterior wall of the esophagus. AA, ascending aorta; E, esophagus; LC, left common carotid artery; LS, left subclavian artery; LV, left vertebral artery; RC, right common carotid artery; RS, right subclavian artery; RV, right vertebral artery; Tr, trachea; VN, right vagus nerve.

[5] further subdivided each of the Adachi-Williams-Nakagawa's type G and H into 9 subgroups according to the origin and number of the vertebral arteries. The present case again belongs to type G of Takemura's classification, since the origin and number of the vertebral arteries present were normal.

The present case is the 8th of this anomaly encountered at Chiba University School of Medicine [6-11] among 2076 corpses, with an estimated frequency of at least 0.38%. The incidence of this variation in Japanese adults ranges from 0.15 [12] to 1.6% [13] with an average of about 0.5% [11, 14]. The present case is the 97th of Adachi's type G (including Williams-Nakagawa's type H and CG) reported in Japan [7].

The anomalous right subclavian artery such as the present case is not uncommon and developmental considerations have been previously reported [4,15]. The authors reported the present case as materials for future statistical research.

#### 要 旨

千葉大学医学部における1996年の解剖学実習において、右鎖骨下動脈が大動脈弓の最終枝として分枝する1例(男性, 83歳)に遭遇したので報告する。本例では大動脈弓から、右総頸動脈、左総頸動脈、左鎖骨下動脈、右鎖骨下動脈がこの順に分枝していた。右鎖骨下動脈は食道と脊柱の間を右上方に走り、食道後壁に圧痕をつくっていた。右反回神経は存在せず、これに相当する枝は迷走神経から直接分枝していた。本例はAdachiの大動脈弓分枝型の分類でG型に、Adachi-Williams-中川-竹村の分類でもG型に、またHolzapfelの分類では5型に相当する。

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### ■使用上の注意

#### 1. 一般的注意

- 1) ショックなどの反応を予測するため、十分な問診をすること。なお、事前に皮内反応を実施することが望ましい。
- 2) ラットに1年間大量皮下投与した慢性毒性試験において、下垂体腫瘍の発生頻度の増加がみられたとの報告がある。
- 3) ショック まれにショックを起こすことがあるので、観察を十分に行い、症状があらわれた場合には投与を中止すること。
- 4) 発疹(紅斑、膨疹等)等の過敏症状を起こしやすい体質の患者
- 5) 気管支喘息又はその既往歴のある患者
- 6) 副作用

2. 次の患者には慎重に投与すること

●「用法・用量」、その他の「使用上の注意」等は、添付文書を御参照下さい。

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