



## RE: An Unusual Course of Right Coronary Artery Originating from Sinoatrial Node Artery

Kemal Kara, MD, Ersin Ozturk, MD,  
 Muzaffer Saglam, MD

All authors: Department of Radiology, GATA Haydarpaşa Teaching Hospital, Istanbul 34668, Turkey

**Index terms:** Coronary artery; Coronary CT angiography; Sinoatrial node artery

Dear Editor,

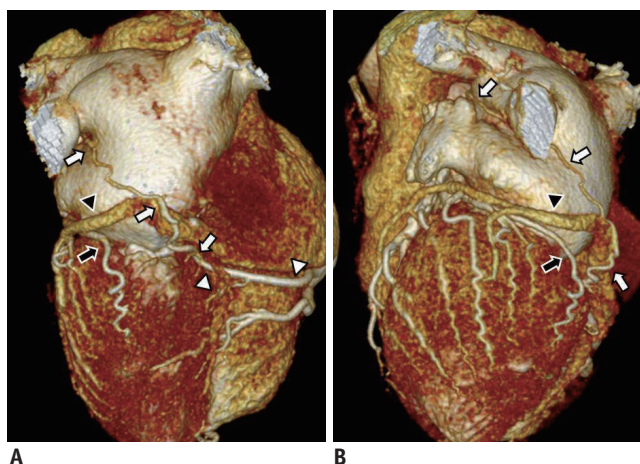
We read with interest the article of Song et al. (1). The authors evaluated the sinoatrial node artery in patients who underwent coronary computed tomographic (CT) angiography. In this study, the authors used a classification based on the origin and course of the sinoatrial node artery. We would like to share our observation with respect to sinoatrial node artery.

Song et al. (1) designated the subtypes R1, R2, L1, L2, and L3, and reported their frequency as 55%, 0%, 33.3%, 11.7%, and 0%, respectively. In a different study, the respective frequencies were 56%, 1.2%, 21.5%, 19.5%, and 0.4% (2). However, there is another subtype that was not mentioned in both studies. In this rare subtype, the sinoatrial node artery originates from the distal part of the right coronary artery (RCA) and courses along the posterolateral wall of the left atrium toward the groove between the left atrial appendage and left superior pulmonary vein (Fig. 1). The distal course of this artery is

Received July 11, 2014; accepted after revision July 20, 2014.

**Corresponding author:** Ersin Ozturk, MD, Department of Radiology, GATA Haydarpaşa Teaching Hospital, Uskudar, Istanbul 34668, Turkey.  
 • Tel: (90) 216 5424654 • Fax: (90) 216 3304388  
 • E-mail: drersinozturk@gmail.com

This is an Open Access article distributed under the terms of the Creative Commons Attribution Non-Commercial License (<http://creativecommons.org/licenses/by-nc/3.0>) which permits unrestricted non-commercial use, distribution, and reproduction in any medium, provided the original work is properly cited.



**Fig. 1.** Volume-rendering images of coronary CT angiography from posterior inferior (A) and lateral inferior (B) views demonstrate S-shaped sinoatrial node artery (white arrows) originating from right coronary artery (white arrowheads). Left circumflex artery (black arrows) and great cardiac vein (black arrowheads) are visible.

similar to the S-shaped sinoatrial node artery originating from the left circumflex artery. This rare subtype can be appropriately designated R3, consistent with the prior classification (1, 2). We retrospectively analyzed the coronary CT angiography results of 875 consecutive patients and found that only two cases (0.2%) showed this type of origin and course of the sinoatrial node artery. The frequency of RCA originating from the S-shaped sinoatrial node artery has been reported as 0.25% and 0.4% (3, 4). Since an unusual course of a coronary artery is important, especially in cardiovascular surgery, this rare subtype should be recognized and pointed out by radiologists.

### REFERENCES

1. Song YS, Lee W, Park EA, Chung JW, Park JH. Anatomy of the sinoatrial nodal branch in Korean population: imaging with MDCT. *Korean J Radiol* 2012;13:572-578
2. Ozturk E, Saglam M, Bozlar U, Kemal Sivrioglu A, Karaman B, Onat L, et al. Arterial supply of the sinoatrial node: a CT coronary angiographic study. *Int J Cardiovasc Imaging* 2011;27:619-627
3. Cezlan T, Senturk S, Karcaaltincaba M, Bilici A. Multidetector CT imaging of arterial supply to sinoatrial and atrioventricular nodes. *Surg Radiol Anat* 2012;34:357-365
4. Saremi F, Channal S, Abolhoda A, Gurudevyan SV, Narula J, Milliken JC. MDCT of the S-shaped sinoatrial node artery. *AJR Am J Roentgenol* 2008;190:1569-1575