Anterior descending coronary artery as a branch of the sinus node artery

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A 52-year old patient underwent coronary surgery. Angiography revealed an anterior descending artery as branch of the sinus node artery, arising from the right coronary, with a trajectory through the transverse sinus, behind the arterial pedicle, to reach the interventricular groove (Figs 1 and 2). To our knowledge, this is the first such report.

Figure 1: (A) Angiographic left anterior oblique view showing the anterior descending artery originating from the sinus node artery (SNA), between the aorta and the superior vena cava. (B) Right anterior oblique view. In contrast to the classical anomalous origin from the right coronary artery, where the anterior descending artery crosses the infundibulum anteriorly, in this case the anterior descending artery ran in the transverse sinus behind the arterial pedicle, before reaching the superior portion of the interventricular groove. This was confirmed intraoperatively.

Figure 2: Left oblique anterior view of the left coronary artery showing a very small anterior descending, which runs parallel to the main anterior descending artery branch of the de sinus node artery.