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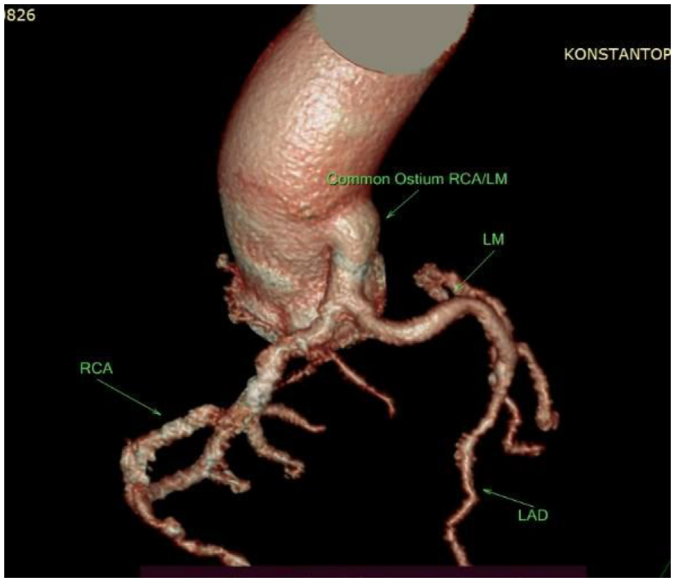
Introduction: Single coronary artery (SCA) is a rare congenital anomaly with a prevalence of 0,02-0.06% in angiographic studies. It can be an incidental finding or it can cause angina, ischaemia and even sudden death, if there is malignant course of the coronary artery between the aorta and the pulmonary artery. We present a very rare case of a single coronary artery arising from the aorta, above the right sinus of valsalva, bifurcating to the right coronary artery (RCA) and the left main artery (LM).
Methods: A 75 year old male, was referred to our cath lab for a scheduled coronary angiography due to exertional angina during the last 2 months. He had a history of smoking, dyslipidaemia and paroxysmal atrial fibrillation. Physical examination was normal, as was the ECG and echocardiogram. Coronary angiography revealed a SCA with a large ostium bifurcating into the left main and the right coronary artery. Contrast infusion by a 6F catheter was insufficient in obtaining good quality images due to the large ostium and its anomalous origin. However, there was high suspicion of a significant lesion in the proximal right coronary artery.
Results: Coronary CT-Angiography (CCTA) was performed which confirmed the presence of a SCA arising from the aorta, just above the right coronary sinus, bifurcating to a large dominant RCA and an elongated LM which was then divided to the left anterior descending and the left circumflex artery. The course of the LM was benign, coursing anteriorly to the pulmonary artery. The proximal part of the RCA was confirmed to have a significant atherosclerotic lesion (the exam was performed under atrial fibrillation). The patient is scheduled for a percutaneous coronary intervention at the proximal RCA.
Conclusions: SCA is a very rare congenital anomaly. In the case we present, the SCA arises from the aorta, above the right sinus of valsalva which, to our knowledge, has not been previously reported. The Lipton-Yamanaka classification for single coronary artery, is not applicable in our case, since the single ostium originates from outside the sinuses of valsalva. Coronary angiography alone, was not sufficient in depicting the anatomy, the course and the exact origin of the single coronary artery and thus, CCTA was performed for further evaluation. The patient's symptoms could not be attributed to the SCA, due to its benign course, but rather to the severe stenosis of the RCA. Hence, in our case, the SCA is an incidental finding, and intervention was necessary due to concomitant coronary artery disease.



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CASE REPORT: THE ACCURACY OF CARDIAC/ CHEST COMPUTED TOMOGRAPHY IN THE DIAGNOSIS OF MULTIPLES THROMBUS IN THE LEFT AND RIGHT ATRIUM AND IN THE AORTIC ARCH IN A 57 YEAR OLD FEMALE NEWLY DIAGNOSED WITH DUCTAL CELL BREAST CARCINOMA AND SMOKER

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Introduction: Cardiac Computed Tomography aids in the “incidental diagnosis” of a Left Atrial and multiple Right Atrial thrombus as well into an unusual location at the level of the aortic arch of the ascending aorta and multiple thrombosis through the descending thoracic aorta in a patient newly diagnosed with breast cancer and longstanding history of smoking.
Methods: We present the case of a 57-year-old female with a history of newly diagnosed bilateral ductal breast cell carcinoma, and past medical history significant for heavy smoker referred by breast surgeon after found “incidental lesion in her right and left atrium and the arch of the ascending aorta” in a chest/cardiac CT (with and without contrast using gadolinium) during her pre surgical evaluation for radical bilateral mastectomy. The clinical history, medical, surgical, and social history (with exception of 120 years smoking) plus physical examination and basic laboratory data plus electrocardiogram are non-significant and within normal limits. The chest CT images were reviewed presenting contrast enhancement in the left atrium, as well as in the right atrium. In addition, a “mass" was visualized in the ascending aortic arch. A three-dimensional trans-esophageal echocardiography reaffirm the diagnosis of this case report depicted in the cardiac chest CTA
Results: The chest CT images were reviewed, and post processing were obtained using standard of protocol in the Siemens Somaton 64 slice scanner using MPI and MPR and 3 D rendering volume images presenting contrast enhancement in the left atrium (one radio contrast structure at the level of the septal leaflet of the mitral valve) as well as in the right atrium adhere at the septal and lateral wall of the tricuspid valve of the right ventricle suggesting of thrombus. In addition, a “mass” suggesting “thrombus “is visualized in the ascending aortic arch adhere to the inferior wall of such vessel not mobile and well depicted and organized. Three-dimension trans-esophageal echocardiography demonstrated, normal left ventricular ejection fraction (LVEF) of 65% and the echocardiogram was compatible with several echogenic lesion within the right atrium, the biggest measuring 1.2 by 1.0 cm in length and in the left atrium in the same localization as depicted in the cardiac CT angiogram as well as in the right atrium and aorta.
Conclusions: This case underscores the pivotal role of cardiac CTA using the post processing and images acquisition in confirming the diagnosis of left atrium and right atrium as well as the level of the aortic arch of multiple thrombus in a patient with a medical history breast cancer and smoker Cardiac CTA provided detailed morphological and functional insights, aiding in the precise characterization of such thrombus in the areas mentioned before.

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STRESS COMPUTED TOMOGRAPHY PERFUSION VERSUS STRESS CARDIAC MAGNETIC RESONANCE FOR THE MANAGEMENT OF SUSPECTED OR KNOWN CORONARY ARTERYDISEASE: RESOURCES AND OUTCOMES IMPACT (STRATEGY II STUDY)

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Introduction: Coronary computed tomography angiography (CCTA) is performed as non-invasive "gate keepers" to invasive coronary angiography (ICA) but intrinsically lacks physiologic data to assess hemodynamic significance of coronary artery disease (CAD). Stress CT perfusion (Stress-CTP) is a recently evolved imaging modality able to assess inducible myocardial perfusion defects. The aim of this study is to compare resources and outcomes of combined CCTA + Stress-CTP versus stress cardiovascular magnetic resonance (Stress-CMR) in symptomatic patients with suspected or known CAD.
Methods: 624 consecutive symptomatic patients with intermediate to high risk pre-test likelihood for CAD or previous history of revascularization referred to our hospital for clinically indicated CCTA + Stress-CTP or Stress-CMR were enrolled. Stress-CTP scans were performed in 223 patients using 256-row whole heart-coverage scanner while 401 patients with clinically indicated Stress-CMR were evaluated in a 1.5-T scanner. Patient follow-up was performed at 1 year after indextest performance. Endpoints were all cardiac events, as a combined endpoint of revascularization, non-fatal MI and death, and hard cardiac events, as combined endpoint of non-fatal MI and death.
Results: Patients who underwent CCTA + Stress-CTP received more revascularization (29% vs 7%, $p < 0.001$) while no differences were found in terms of non-fatal MI and death between the two strategies. According to the predefined