acute aortic syndromes and the treatment should not be postponed once scanners show sensitivities of up to 100% and specificities of 98–99%. Computed tomography scanning has been used for more than two decades to identify patients with acute aortic syndromes: aortic dissection by helical computed tomography (CT). Eur Radiol 2004;14:1999–2008.

We read with great interest the case reported by Lebreton et al. [1] who described a false-positive result of a computed tomography suggesting an intramural hematoma which led to unnecessary surgery. Computed tomography scanning has been used for more than two decades to identify patients with acute aortic syndromes: aortic dissection by helical computed tomography (CT). For this reason, we have to perform an aortotomy and inspect the presence of intramural hematoma (IMH). IMH may be located in the posterior aortic wall of the aorta, in an area which is difficult to see after the pericardial opening. For this reason, we have to perform an aortotomy and inspect the aorta and the suspicious area from its internal surface. After sternotomy and the opening of the pericardium it is very useful to perform an epicardial ultrasound of the thoracic aorta that may resolve some of our doubts in cases of rare conditions. According to the international bibliography, such an examination can influence the decision-making and the type of the intervention in 41% of the cases [5]. It can provide excellent information about the aortic diameter, the presence of atherosclerotic lesions of the anterior and posterior aortic wall. It can also provide information about the quality of the aortic wall. It does not require a specific probe. The same probe of the TEE before its entrance into the esophagus for the intraoperative examination can be used. The cardiac surgeon with the probe of the TEE coated by a sterile drape should perform the epicardial ultrasound of the ascending aorta and aortic arch. Then the anesthesist can proceed with the routine TEE.

References


EComment: Acute aortic syndrome: have we always got a precise diagnosis?

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It was with great interest that we read your case report [1], which reminds us that the specificity of many of the usual imaging diagnostic tools used in case of acute aortic syndrome is so far not 100% accurate. In reality, the usual computed tomographic angiography (CTA) or transesophageal echocardiography (TEE) in some ‘falsely-positive’ findings could and have lead both, patients of yours and cases of ours to the operating room for a median sternotomy [1], or a thoracotomy [2].

A series of benign conditions like aortitis, endoluminal thrombus, soft (without calcification) atheromatous plaque [3], pericardial recess [1], remnant of a non-patent ductus arteriosus [2] and previous surgery of the aorta, could misleadingly be diagnosed as acute aortic syndrome.

The diagnostic tool with the specificity closest to 100% seems to be the multi-detector computed tomography (MDCT), particularly the 16-, 32- and 64-section MDCT [3, 4]. Its presence in tertiary hospitals with its excellent resolution offers a precise diagnosis in minimum time [4]. MDCT also provides information about the coronary arteries of the patient who might be subjected to surgery to deal with the acute aortic syndrome. If you do not have a MDCT (as in our case) you should repeat the TEE in the intensive care unit before transferring the patient to the operating room. If the TEE gives you false-positive results, as we experienced [2], (considering that TEE is operator-dependent), after the sternotomy one has to exclude totally the presence of intramural hematoma (IMH). IMH may be located in the posterior wall of the aorta, in an area which is difficult to see after the pericardial opening. For this reason, we have to perform an aortotomy and inspect the aorta and the suspicious area from its internal surface.

After sternotomy and the opening of the pericardium it is very useful to perform an epicardial ultrasound of the thoracic aorta that may resolve some of our doubts in cases of rare conditions. According to the international bibliography, such an examination can influence the decision-making and the type of the intervention in 41% of the cases [5]. It can provide excellent information about the aortic diameter, the presence of atherosclerotic lesions of the anterior and posterior aortic wall. It can also provide information about the quality of the aortic wall. It does not require a specific probe. The same probe of the TEE before its entrance into the esophagus for the intraoperative examination can be used. The cardiac surgeon with the probe of the TEE coated by a sterile drape should perform the epicardial ultrasound of the ascending aorta and aortic arch. Then the anesthesist can proceed with the routine TEE.

References