

Computer tomography signs and findings in impending and complete aortic rupture

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Introduction:

Aortic rupture is a dramatic event, which needs a prompt and fast diagnosis and has a high mortality rate. Early and exact diagnosis of impending aortic rupture can be lifesaving. Furthermore, differentiating between impending and complete rupture is important, because it reflects on the management and the prognosis of the patient.

Aim:

The article aim is to present the different CT imaging findings in impending and ruptured aortic aneurysm (AA), in order to make the diagnosis clearer and prompt.

Materials & Methods:

Computed tomography (CT) angiography using a multidetector scanner is the standard of practice for evaluating impending and complete aortic rupture. We present various CT signs of impending and ruptured aortic aneurysms. These findings can be categorized according to the location - intramural, luminal and extraluminal. Intramural signs generally indicate impending aortic aneurysm rupture, whereas luminal and extraluminal signs imply complete rupture.

Results:

Imaging findings of aortic aneurysm rupture vary from small aortic leaks with subtle infiltration to excessive extravasation. Their presentation depend on the site of rupture. We demonstrate illustrative cases of different findings according to the site of rupture.

Conclusion:

Being familiar with the characteristic CT imaging findings, can help us differentiate impending from ruptured AA, detect the exact place of rupture and therefore guide the decision-making process for method of treatment.

Keywords: Aortic aneurysm, Aortic rupture, Computer tomography