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Aortic aneurysm dissection - always a life-threatening condition. The case report of a 43-year-old male.

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Case report

A 43-year-old obese male, with uncontrolled arterial hypertension for five years, was brought by an Emergency Medical Team to the Emergency Room with severe chest pain radiating to the interscapular region of the back. Laboratory tests revealed multi-organ failure. Transthoracic echocardiography revealed hyperkinetic contractibility of the left ventricular walls with preserved left ventricular ejection fraction 70%, no pericardial fluid, type A aortic dissection- prominent flap in the aortic arch, brachiocephalic trunk and left common carotid artery. The computed tomography angiogram revealed aortic dissection from the proximal part of the ascending aorta to the level of the division of the common iliac arteries. The dissection also involved the brachiocephalic trunk, the initial segment of both subclavian arteries and the initial segments of both common carotid arteries. The patient was admitted to the Department of Cardiac Surgery and qualified for urgent surgical treatment- implantation of vascular prothesis. Unfortunately, the patient died a day after surgery.

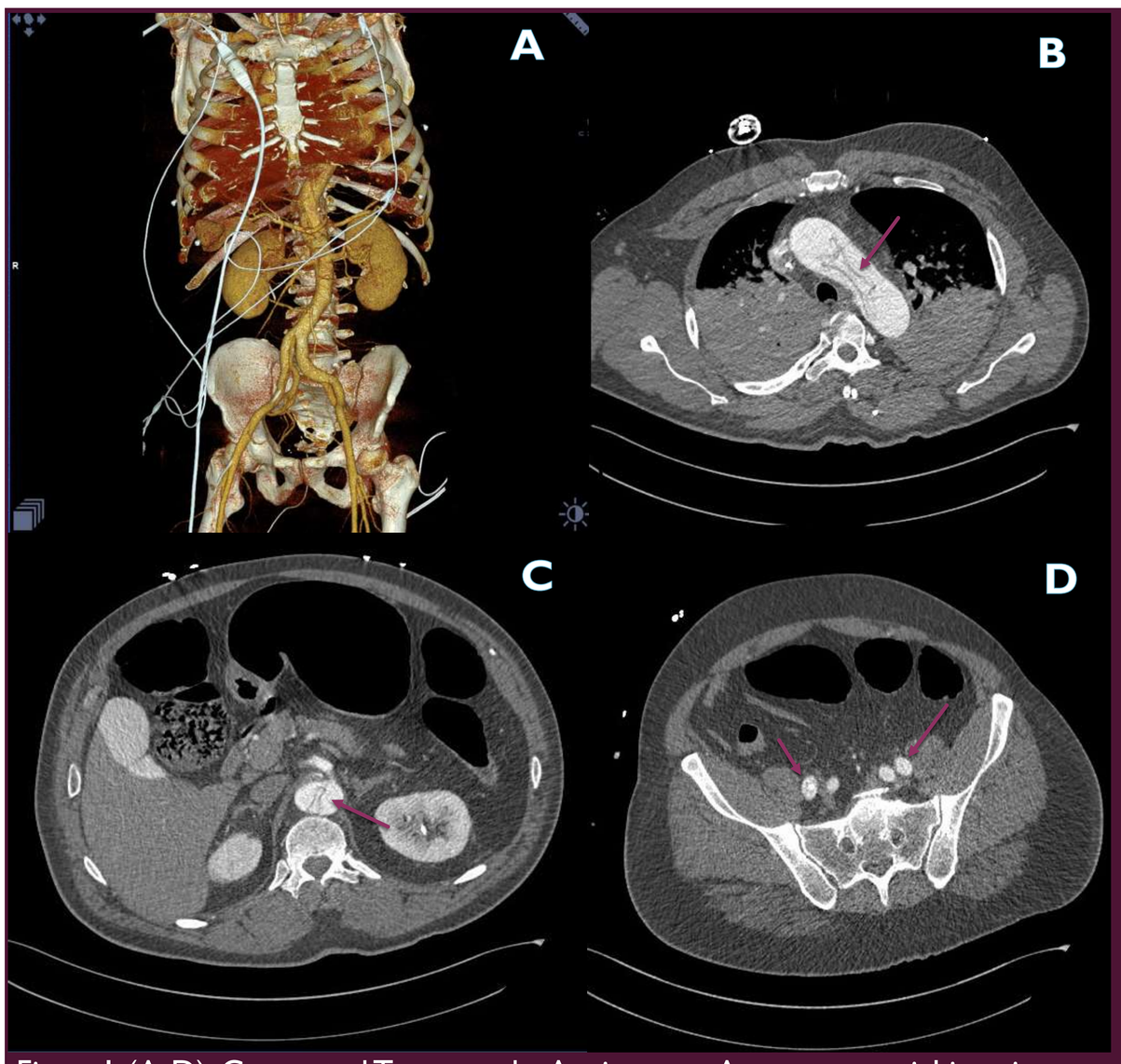
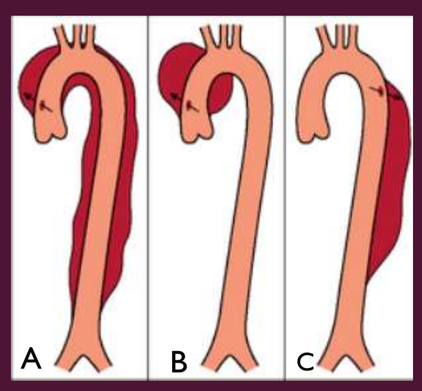


Figure1 (A-D). Computed Tomography Angiogram. A: aorta- spatial imaging (3D), B: aortic arch dissection, C: aortic dissecion, D: iliac arteries dissecion

Acute aortic syndromes have a high mortality rate. The incidence of aortic dissecting aneurysms is around 6 cases/100 000 people/year. The most common classification of aneurysms is according to DeBakey and Stanford. It depends on the location and extent of the dissection.

The risk of urgent surgery for ruptured or dissected aortic aneurysms is significantly higher than elective surgery, with 30-day mortality estimated at 44%, while the annual mortality after elective surgery for unruptured aneurysms is around 16%.



Classification of aortic dissection:
A: DeBakey I, Stanford A
B: DeBakey II, Stanford A
C: DeBakey III, Stanford B

Summary

Multislice computed tomography, due to the possibility of a comprehensive assessment of the aorta and the relatively short time of examination, remains the gold standard in patients with suspected acute aortic syndrome. The risk of aortic dissection depends on the severity of the aneurysmatic dilation, lifestyle, comorbidities - particularly hypertension - and genetic factors. Aortic dissection is always a life-threatening condition and the only treatment is emergency surgery.

References:
1. 2. Booher AM, Eagle KA. Diagnosis and management issues in thoracic aortic aneurysm. Am Heart J. 2011 Jul;162(1):38-46.e1.
2. Drożdż J., Machała W., „Kardiolog na ostrym dyżurze”; Termedia.2019; 137-148
3. ESC guidelines for the diagnosis and treatment of aortic disease 2014.