Type-1 Aortıc Dısectıon: A Case Report

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Citation

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Abstract

Cardiovascular diseases have become the leadingcause of death in countries with high medical standards (1). Aort dissection is a prominent cause of sudden death as well as severe abdominal, chest or back pain. These diseases disproportionately affect the elderly. Aortic dissections occur from a violation of the intima that allows blood to enter the media and dissect between the intimal and the adventitial layers. Common sites for tear include the ascending aorta and the region of the ligamentum arteriosum(2).

CASE REPORT

A 50 year old male patient came to our ER with chest pain. In his anamnesis, he reported a chest pain that is like the stabbing of a knife into his chest and abdomen. The ache was going on for about a week, from time to time. It is understood that he had been to the public hospital, had prediagnosed as an Acute Coroner Syndrome patient and had been transferred. In his physical examination, his blood pressure was 140/70 mmHg and pulse was 64 /min. He was conscious, oriented and cooperated. His pulse was taken periodically. ECG was in sinus rhythm and there were no symptoms of ischemia. His cardiac markers were analyzed. They were between normal values. Because his pain continued, with the prediagnosis of Pulmonary Emboli, his contrasted thorax CT was taken. In his CT scan, an ascending aortic and a descending aortic dissection up to the iliac bifurcation was present. (Fig. 1-2) An urgent operation was planned for the patient.

However, he was transferred to another medical center for operation on the request of the relatives of the patient.

Figure 1

Figüre-1: Aort dissection in assendan aorta

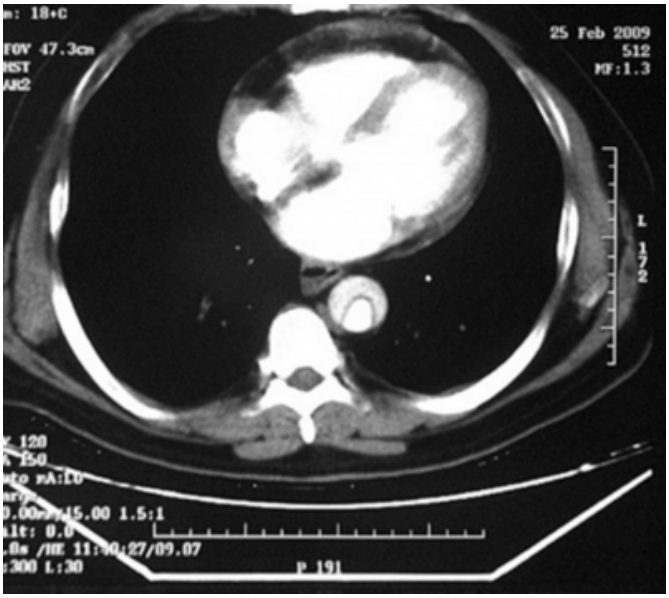
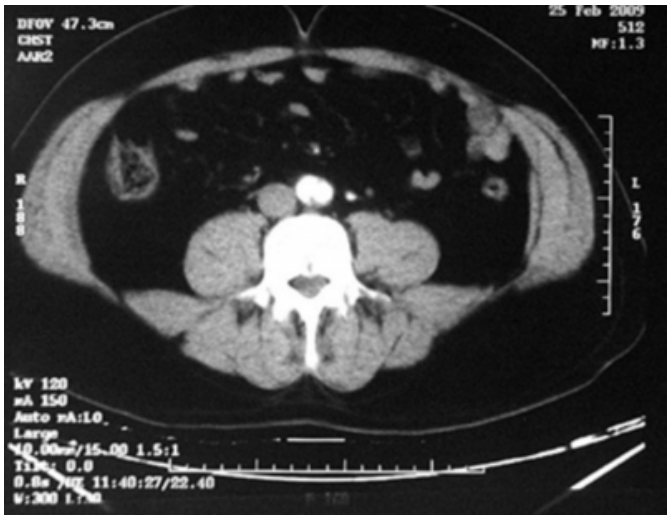


Figure 2

Figüre-2: Aort dissection in dessendan aorta

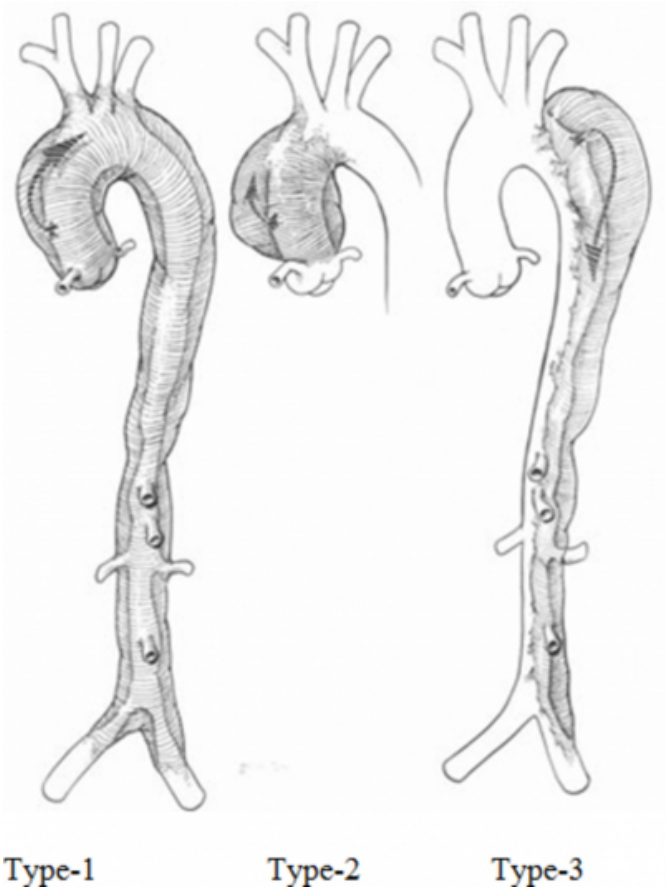


DISCUSSION

Aortic dissection presents in a bimodal fashion. One group consists of younger patients with specific predisposing conditions. The predominant group consists of patients above age 50 (mean age 63) with hypertension. Two-thirds of patients are male, and 72 percent have hypertension (2). Atherosclerosis is only a minor contributor to the pathogenesis of dissection. Predisposing conditions for dissection include multiple forms of congenital heart disease, connective tissue disease, and pregnancy. Approximately 25 to 30 percent of patients with Marfan syndrome develop a dissection. Aortic dissections have been classified by two separate systems. The Stanford classification considers any involvement of the ascending aorta a type A dissection and dissections restricted to the descending aorta type B. DeBakey classified type I dissections as those which simultaneously involve the ascending aorta, the arch, and the descending aorta. Type II involves only the ascending aorta and type III only the descending aorta (Figüre-1) (2-3).

Figure 3

Figüre-3:De Bakey Classification



Aortic dissections commonly present (>85 percent) with abrupt and severe pain in the chest or between the scapulae. Recent literature suggests that back pain is a less common presentation than previously thought (2-4). One half of all patients often describe the pain as tearing or ripping. Pain in the anterior chest often is associated with involvement of the ascending aorta (70 percent). Back pain may indicate involvement of the descending aorta (63 percent). Systemic constitutional symptoms may occur with the dissection. Nausea, vomiting, and diaphoresis are common. Patients frequently are apprehensive and express feelings of impending doom.

Physical examination may help to eliminate some differential diagnoses but most likely will reveal a normal heart and lung examination. The diastolic murmur of aortic insufficiency may be heard. Decreased pulsation in the radial, femoral, and/or carotid arteries should significantly raise the suspicion of an aortic lesion but is present in less than 20 percent of patients (2). Specific threshold values of blood pressure changes between extremities have not been defined. Hypertension and tachycardia are commonly

present, but the dissection also may cause hypotension. Hypotension may accompany pericardial tamponade or coronary artery interruption. Tamponade may result in muffled hearttones, elevated jugular venous pressure, and pulsus paradoxus. Compression of the recurrent laryngeal nerve or the superior cervical sympathetic ganglion may cause either hoarseness of the voice or Horner syndrome, respectively.

Thoracic dissecting aneurysms most commonly (90 percent) have an abnormality on chest radiography. Widening of the me diastinum, an abnormal aortic contour, pleural effusions, or deviation of the trachea, mainstem bronchi, or esophagus may be seen. Intimal calcium may be visible and distant from the edge the aortic contour (calcium sign). CT scanning may reliably make the diagnosis of aortic dissection. Sensitivity for dissection ranges from 83 to 100 percc and specificity ranges from 87 to 100 percent.8 Spiral CT scann with rapid intravenous boluses of radioopaque contrast material can be more sensitive. Angiography is still considered the “gold standard” for diagnostic by many and will provide more anatomic detail than a CT scan. Magnetic resonance angiography (MRA) is comparable to angiraphy and CT angiography, but is not readily available or practic for most ED patients (2).

Patients with suspected aortic dissection commonly will require antihypertensive treatment, which must be provided without increasing the shear force on the intimal flap of the aorta. Therefore, medications with negative inotropic effects must be given initially. Rapid referral to a surgeon is mandatory(3-5). Dissections with involvement of the ascending aorta require prompt surgical repair. Patients with dissecting aneurysms of only the descending aorta are worse surgical risks, and indications for repair are controversial.

Despite new advances, acute type A aortic dissection is still associated with high morbidity and mortality rates. At present, hospital mortality is reported between 15% and 35%, with 5-year survival rate of 65–75%. (6)

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