

Type 3 Ascending Aortic Dissection with Type 1 Dissection Which Disappeared Spontaneously in Three Days

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ABSTRACT

Aortic dissection may happen spontaneously, traumatic or iatrogenically. In our case the patient presented to emergency room (ER) with chief complain of chest and back pain. Coronary angiography and CT-Scan were done and showed type 3 aortic dissection, extended retrogradely to the aortic root and associated with type 1 iatrogenic dissection. Patient refused operation. After three days, control CT-Scan was showed a full resolution of type 1 dissection and the intramural maematoma. Type 3 dissection was treated laterly by TEVAR.

Keywords: Aortic Dissection; Iatrogenic; Mural thrombus; Disappear Spontaneously

Case Report

A 60 years old female patient, known to have essential hypertension and bronchial asthma with a family history of coronary artery disease, presented to ER complaining of chest and back pain associated with left arm numbness. Investigations were done and showed a non aneurysmatic dilatation of ascending aorta with no signs of any possible dissection. After five months, the

patient developed same complain, to rule out any acute coronary event an angiography was done and coronary arteries were found to be clean, the aortothoracic CT-Scan showed type 3 dissection extended from left subclavian artery to right common iliac artery and retrogradely to coronary orifice associated with ascending aortic type 1 dissection with intramural haematoma mostly occurred iatrogenically during angiogram (Figure 1).



Figure 1.

At the beginning we thought of type one aortic dissection and an urgent operation was planned, but the patient refused operation, so she was kept in our ICU for closed observation and antihypertensive medical treatment. On the third day of the event, control CT-Scan was repeated and showed no sign of type one dissection and the intramural haematoma had been disappeared completely (Figure 2), so we claim that there was a combined aortic dissection of type three and type one which created iatrogenically in the catheter lab. After two days, the patient was treated for type 3 aortic

dissection by thoracic endovascular aneurysm repair (TEVAR). Control investigations were done and showed no leak or any other possible complication. On the 8. day of the operation, patient was discharged on medical treatment. She was observed as out patient in our clinic. About two months later, the patient presented to our clinic as an outpatient for routine control, an aortothoracic CT-Scan was repeated again and showed full recovery of type one aortic dissection and EVAR stent was in good position with no signs of any leakage (Figure 3).

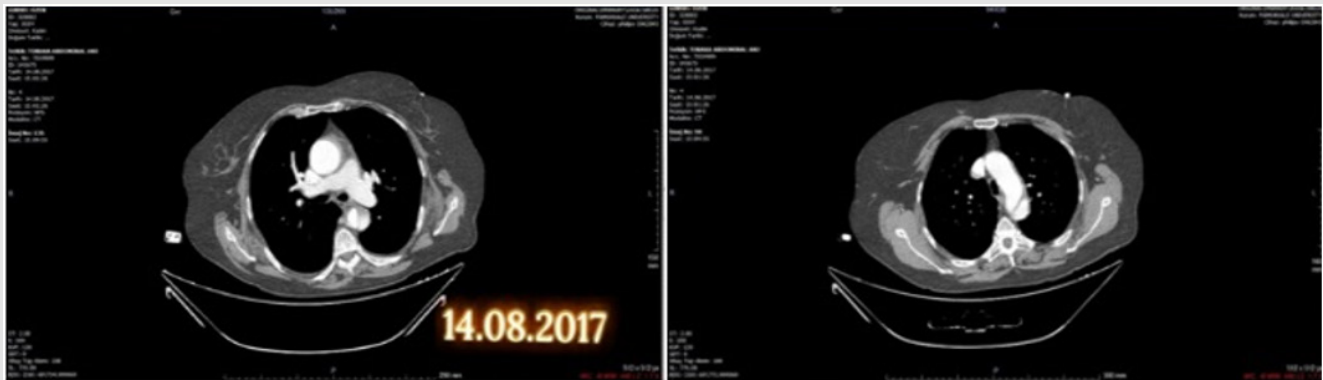


Figure 2: Control aortothoracic CT-Scan after three days which showed a full resolution of type 1 aortic dissection.



Figure 3: Post EVAR control CT-Scan with full resolution of intramural haematoma.

Discussion

Aortic dissection is a case of aortic wall layer separation with high mortality and morbidity. About 1 to 3% of all autopsies showed evidence of aortic dissection. In general population, the age of 50-65 showed a peak of the incidence of dissection while patients with connective tissue disorders are at high risk of dissection at the age of 20 to 40. 20% of the patients with aortic dissection die before reaching the hospital while 1-3% of remain patients die without treatment in the first 24 hours, 30% of them in the first week and about 80% in the first two weeks and 90% die in the first year [2].

Management of acute aortic dissection is done surgically by resection the segment containing intimal tear and replaced by a dacron graft mainly in DeBakey type 1 and type 2 while type 3 is

usually treated medically unless there is any clinical or radiological evidence of impending rupture, propagation of the dissection, persistent pain, bleeding into pleural cavity or development of saccular aneurysm [3]. TEVAR nowadays is one of the best choices of type 3 dissection management [4]. In our case, the patient developed both type 1 and type 3 aortic dissection and was advised to be operated for type 1 urgently but the patient refused operation, so kept in our intensive care unit for observation and medical treatment. After three days of the event, the control CT-Scan of the aorta showed no intramural haematoma in ascending aorta.

Intramural haematoma may undergo progression by time or stay stable all the time. Studies about the time of the resolution of intramural haematomas are still limited. Complete resolution of

the haematoma may be occur early and at least after one month of the event [5]. The interesting side in our case is the time of the resolution of the intramural haematoma which occurred on the third day of the onset of the dissection. Our aim of the treatment in the first stage was to treat type 1 dissection surgically as soon as possible, but because the patient refused surgery we had to wait and observe. The control CT-Scan had changed our plan and our new goal became the management of type 3 dissection by EVAR. In general type 1 and complicated type 3 aortic dissection require surgical management, but in our case, type 1 dissection disappeared spontaneously and type 3 still in same situation, has not developed any persistent pain or any other complication such as ischemic complication, according to our experience in such cases and literature researches we decided to do EVAR to our patient before discharge. Our aim was to preserve our patient from late possible aortic dissection complications which presents in high rate as high as 20-50 % in the following three to five years [6]. EVAR was done successfully on the fifth day of the event.

On the 8th day of EVAR patient was discharged, she was followed up as an outpatient. Later on, control CT-Scan repeated and showed no progression. Clinically patient has no pain or any com-

plain. In our case the patient had both type 1 and type 3 aortic dissection. Type 1 dissection with intramural haematoma was disappeared after 3 days of the event. Its interesting for type 1 aortic dissection to disappear during so short period of time as 3 days. We reviewed literatures for similar cases but there were no cases of aortic dissection disappearance in three days as we had in our case.

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