LETTER TO THE EDITOR

DOI: 10.4274/nkmj.galenos.2021.85047
Nam Kem Med J 2022;10(2):225-227

Iatrogenic Coronary Artery Dissection: Early or Late Intervention?

İyatrojenik Koroner Arter Diseksiyonu: Erken Müdahale mi Geç Müdahale mi?

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Dear Editor,

In clinical practice, coronary artery dissections mostly arise spontaneously or as iatrogenic complications [due to percutaneous coronary interventions (PCIs), etc.] and appear to be associated with significant morbidity and mortality[1-5]. Importantly, the guidance of intravascular imaging tools [intravascular ultrasound (IVUS), etc.] has been strongly recommended for the invasive management of coronary artery dissections[4]. Unfortunately, these imaging modalities may not always be readily available in all cardiovascular clinics potentially leading to a significant therapeutic challenge particularly in cases requiring urgent management. On the other hand, conservative management of these dissections (followed by a deferred PCI, where necessary) might also be considered as an efficient alternative in the absence of high-risk clinical characteristics (including malignant arrhythmias, hemodynamic compromise and intractable angina pectoris)[1]. Herein, we report conservative management of an iatrogenic coronary artery dissection (due to a PCI) in a 47-year-old male patient. Written informed consent for publication was obtained from the patient.

A 47-year-old male was referred to our clinics for a failed PCI of the right coronary artery (RCA) after his admission with a non-ST segment elevation myocardial infarction presentation in another center. Coronary angiographic (CAG) records demonstrated an iatrogenic dissection of the RCA (Figure 1A). The patient admitted to the coronary intensive care unit had a blood pressure value of 130/80 mmHg along with a pulse rate of 96/min. Electrocardiogram exhibited a normal sinus rhythm with inferior q waves and T wave inversion. A repeat CAG revealed a long spiral dissection starting from the ostium and extending to the mid-distal segments of the RCA, and to a minor extent, to proximal aorta (Figure 1B). Owing to the stable clinical status of the patient and apparently challenging features for further interventional modalities, the patient was managed with a conservative strategy alone (receiving necessary medications including acetyl salicylic acid, clopidogrel, metoprolol, ramipril, benidipine, trimetazidine, isosorbide mono nitrate). During the hospital stay, there was no further progression of the proximal aortic dissection as demonstrated on computed tomography (Figure 2A, 2B). CAG at 3 months demonstrated complete recovery of the RCA and aortic dissections along with a critical stenosis in the distal RCA (Figure 3A) that was subsequently managed with a drug-eluting stent (2.5x16 mm) (Figure 3B).

The CAG characteristics of iatrogenic coronary artery dissections might help predict clinical outcomes and hence, potentially allow the implementation of the most efficient management strategy[5]. In this regard, harnessing the National Heart Lung and Blood Institute classification may be quite practical[5]. Notably, double-wire technique may also be tried in certain cases with high-risk features particularly in the absence of intravascular imaging guidance with IVUS, etc.[6].

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Received: 10.09.2021 **Kabul tarihi/Accepted**: 30.09.2021

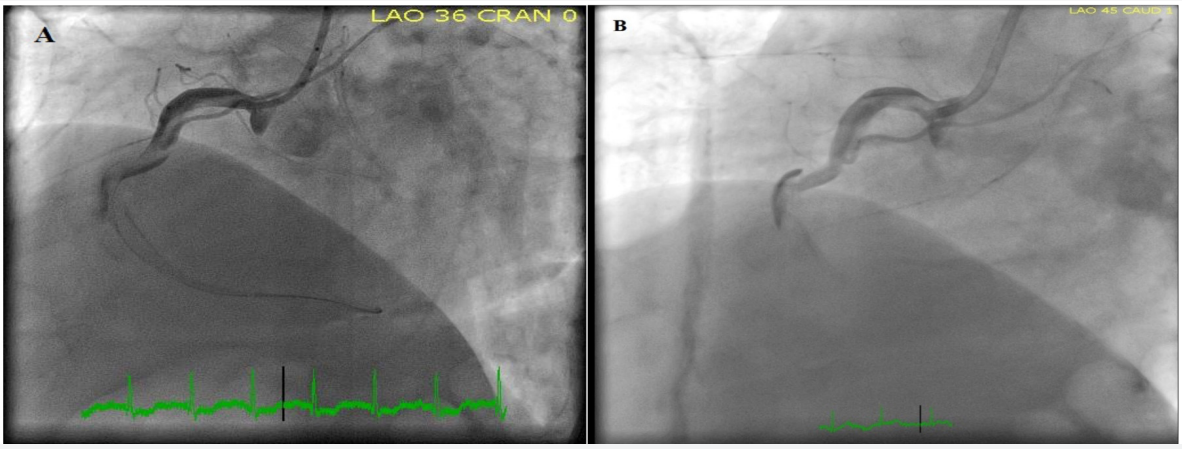

Figure 1. Iatrogenic dissection of the right coronary artery in external center, A. Spiral dissection due to the catheter in the procedure, B. A repeat control angiography image in internal center

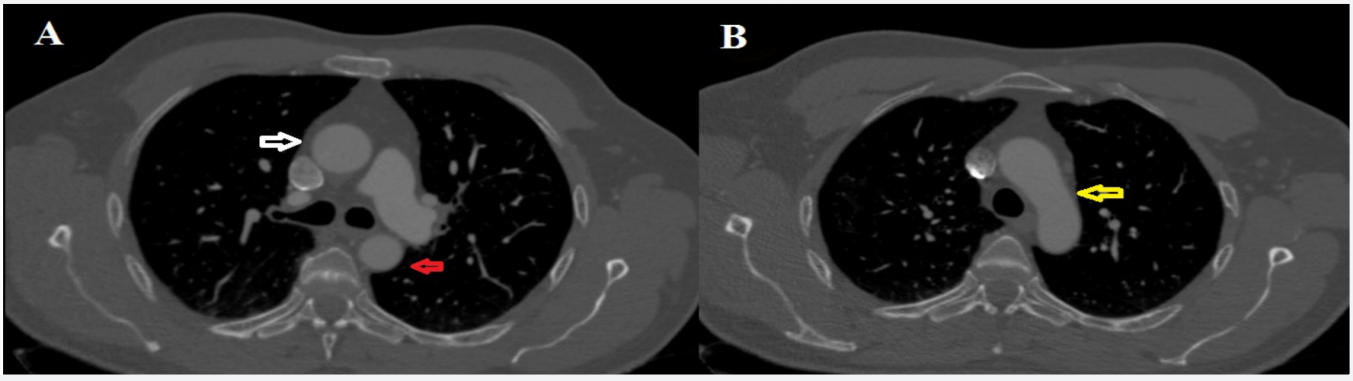

Figure 2. Aortic images in computed tomography angiography, A. There was no progress in dissection of the ascending aorta (white arrow) and descending aorta (red arrow). B. Arcus aorta (yellow aorta)

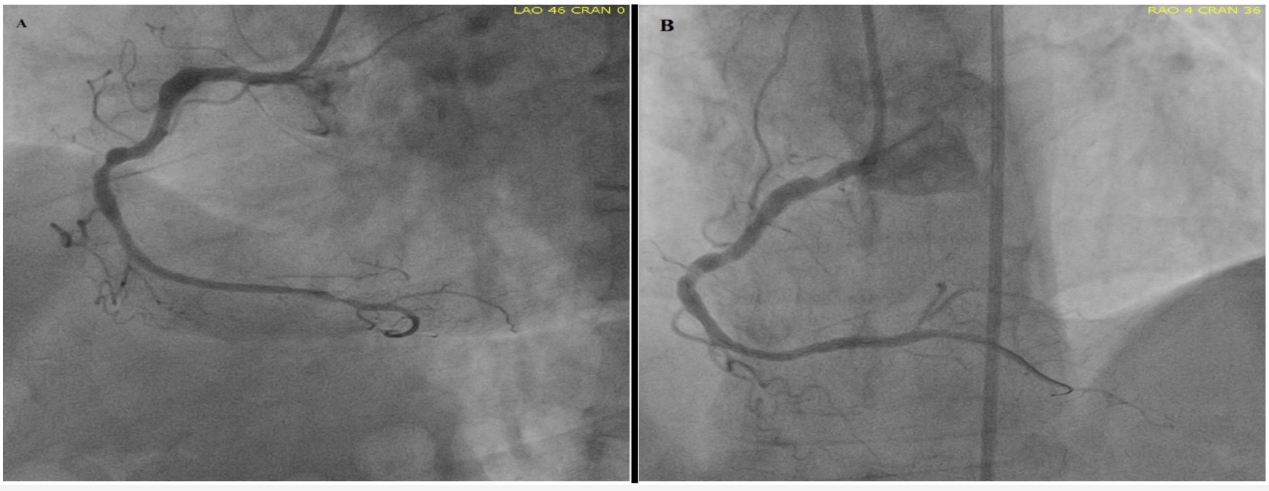

Figure 3. A. Control angiography image at the 3rd month after the procedure, B. Angiographic image after directly right coronary artery distal drug-eluting stent (2.5x16 mm) implant

In conclusion, the present case clearly demonstrates the feasibility of conservative management of iatrogenic coronary artery dissections (followed by a deferred PCI, where necessary) in the absence of high-risk clinical features. In this context, conservative strategy might possibly prevent further complications and unnecessary stent implantations potentially associated with adverse outcomes in the short and long-terms.

Ethics

Informed Consent: Consent form was filled out by a participant.

Peer-review: Externally peer-reviewed.

Authorship Contributions

Surgical and Medical Practices: G.T., Concept: G.T., K.Y., Design: G.T., F.E.U., K.Y., Data Collection or Processing: G.T., F.E.U., Analysis or Interpretation: G.T., F.E.U., K.Y., Literature Search: G.T., F.E.U., Writing: G.T., K.Y.

Conflict of Interest: No conflict of interest was declared by the authors.

Financial Disclosure: The authors declared that this study received no financial support.

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