

New and important guide in acute coronary syndrome: optical coherence tomography

Akut koroner sendromda yeni ve önemli bir rehber: Optik koherans tomografi

A 41-year-old female has undergone coronary angiography for stable angina in a cardiology hospital and a successful stent implantation to proximal left anterior descending (LAD) artery has been performed one month ago. After a month, she was admitted to the same center with acute chest pain and the following angiography revealed stent thrombosis. A balloon angioplasty was performed and resulted with a TIMI III flow, however a dissection was seen proximal to the stent and the patient was referred to our hospital for coronary bypass surgery. She complained of an intermittent chest pain with accompanying dynamic electrocardiogram changes during the admission. A coronary angiography with optical coherence tomography (OCT) study was planned. Coronary angiography revealed a moderate (50%) stenosis and dissection proximal to the LAD stent (Fig. 1A). The following OCT examination clearly showed the strut malposition and dissection at the proximal part of the stent (Fig. 1B) with in-stent thrombus (Fig. 1B). After the guide-wire has been clearly positioned inside the stent under the guidance of the OCT, the struts were dilated by using a 2.5x20 mm complaint balloon (Fig. 1C). Following OCT examination showed the complete apposition of the stent struts (Fig. 1D). The patient was discharged with appropriate medical therapy after an uneventful follow-up.

Although increasing number percutaneous coronary interventions were performed nowadays some complex cases may be beyond the borders of conventional angiography. Especially for the evaluation newly intervened lesions OCT, having high intimal resolution, helps the interventional cardiologist for the assessment of many complications including stent apposition, intrastent dissection, thrombus and endotelial protrusions (1-5).

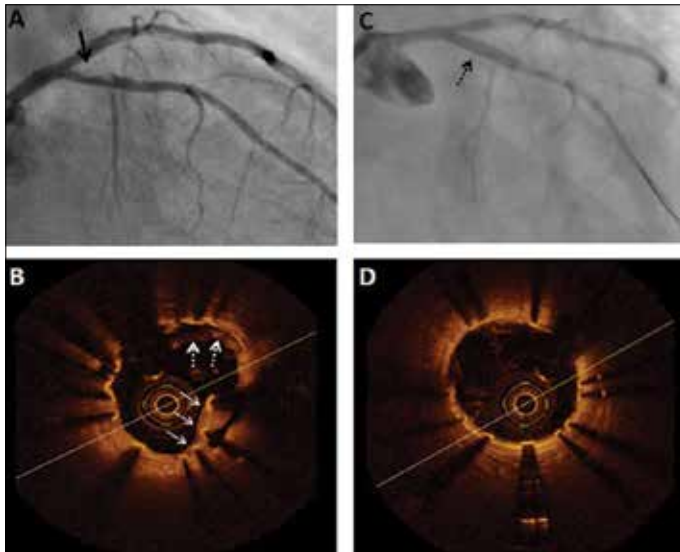


Figure 1. A) Coronary angiographic image showing dissection and thrombus proximal to the LAD stent (black arrow). B) Before balloon dilatation, OCT demonstrated instent thrombosis (white dotted arrows), strut malposition and dissection at the proximal part of the stent (white arrows). C) Coronary angiographic image of LAD proximal segment (dotted black arrow) after successful balloon dilatation. D) Final OCT image showing the complete apposition of the stent struts
LAD - left anterior descending artery, OCT - optical coherence tomography

OCT imaging showed iatrogenic strut malposition, dissection and thrombus as a result of balloon dilatation under the stent struts in this case which was not clearly differentiated by conventional angiography. Furthermore OCT ensured the intrastent location of guidewire, complementary to successful balloon dilatation.

We believe that the complementary use of OCT during complex coronary interventions will increase in the near future world-wide.

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Dirençli hipertansiyonda yeni bir tedavi yaklaşımı: Renal sempatik denervasyon

A novel therapeutic approach to resistant hypertension: renal sympathetic denervation

Hipertansiyon, hem bireysel hem de toplumsal düzeyde önemli etkileri olan ve yaygınlığı giderek artan global bir sağlık sorunudur. Günümüzde hipertansif hastaların yaklaşık yarısında değişik nedenlerle hedef kan basıncı (KB) değerlerine ulaşamamakta ve bu konuda yeni tedavi seçeneklerine ihtiyaç duyulmaktadır. Sempatik sinir sisteminin hipertansiyon patogenezindeki rolü düşünüldüğünde, renal sempatik sinirler dirençli hipertansiyon tedavisinde potansiyel tedavi hedefleri olarak karşımıza çıkmaktadır. Son zamanlarda geliştirilen ve renal sempatik denervasyon (RSD) adı verilen teknikte, radyofrekans (RF) jeneratörüne bağlı bir kateterle perkütan yolla ana femoral arterden girilmekte ve her iki ana renal arterin adventisyal tabakasına gömülü olan renal sempatik sinirlerin ablasyonu amaçlanmaktadır (1).

Bu alanda yapılan ilk kohort çalışması Krum ve ark.larınca (1) HTN-1 çalışması adıyla 2009 yılında yayınlanmıştır. Üç veya daha fazla antihipertansif ilacı düzenli almasına rağmen sistolik KB >160 mmHg olan