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Different Results of Proximal Coronary Endarterectomy via Conventional Pull-Out Method

Konvansiyonel Çek-Çıkart Yöntemiyle Yapılan Proksimal Koroner Endarterektominin Değişik Sonuçları

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ABSTRACT

In these cases we overview two different results of coronary endarterectomy via conventional pull-out method. Performing proximal aggressive coronary endarterectomy by pull-out method can cause undesirable complication in the proximal coronary artery segment.

Key Words: *Endarterectomy; coronary artery bypass.*

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ÖZET

Bu yazıda konvansiyonel çek-çıkart yöntemiyle yapılan koroner endarterektominin iki değişik sonucunu sunmaktayız. Proksimal koroner endarterektomiye konvansiyonel çek-çıkart yöntemiyle müracaat edilmesi, koroner arterin proksimal kısmında istenmeyen problemlerin oluşumuna neden olabilir.

Anahtar Kelimeler: *Endarterektomi; koroner arter baypas.*

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INTRODUCTION

With the recent trend treating more cases of diffuse coronary artery disease, increasingly indicated surgical therapy for severe and diffuse coronary artery disease has resulted in a revival of interest in coronary endarterectomy (CE)[1-3]. Several techniques have been introduced for CE to expand surgical options for diffuse coronary artery disease. Conventional pull-out method is one of these techniques[4,5].

CASE REPORT

A 55-year-old male patient underwent four-vessel coronary bypass procedure. At the time of the operation 1 cm arteriotomy was performed on the diffusely occluded right coronary artery and CE (2 cm proximally and 3 cm distally) was performed by conventional pull-out method. The plaque was removed totally from the distal part of the artery. The saphenous vein graft was anastomosed to the right coronary artery after the endarterectomy. A control volume computed tomography was performed to the patient 13 months after the four-vessel coronary bypass procedure (Figure 1).

A 56-year-old male patient underwent three-vessel coronary bypass procedure. At the time of operation saphenous vein graft had been anastomosed to the right coronary artery following total endarterectomy by the conventional pull-out method. The control coronary angiography showed the total occlusion of the vein graft, and an ostial dissection caused by endarterectomy (Figure 2).

Both of the patients were medicated with the low molecular weight heparin and oral anticoagulants during hospital stay, and 300 mg acetylsalicylic-acid and 2.5 mg oral warfarine was prescribed at the time of discharge.

DISCUSSION

Several techniques have been introduced for CE and different methods for reconstructing endarterectomized vessels[3-5]. In the study of Nishi et al. patency rate of CE with the pull-out method was found to be 81.2% after a mean period of 21 ± 16 months following operation[5]. Although they described a full plaque removal to distally during the pull-out technique, it did not mention how to perform CE to proximally exactly. We believe subspecific alterations in this technique would result different outcomes. The same technique had different results in our two patients. Distal plaque removal causes usually a better coronary distal bed. But proximal plaque removal via a limited arteriotomy can cause poor outcomes. First, we can lacerate the native vessel surface which may result native coronary artery dissection. Second, we can provide a native passage of high blood flow from the aorta to the distal coronary bed which can block the flow of bypass-grafts due to the competition, and cause simply early thrombosis. Probably we have seen both poor results in the second patient. To optimize the technique, the avoidance of proximal aggressive CE by the pull-out method or no-touch technique to the proximal would come along with better results.

Figure 1. Postoperative volume computed tomography (CAT scan), RAO view. Right coronary artery is diffusely occluded.

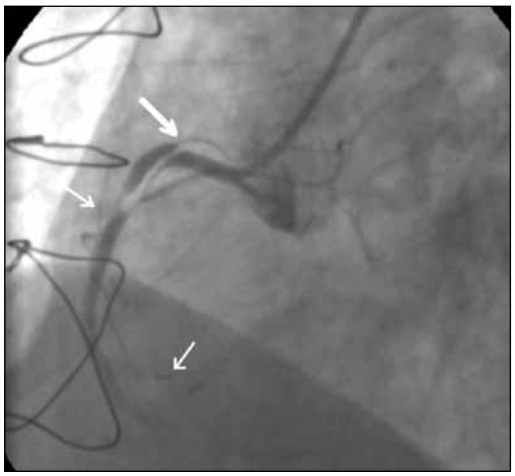

Figure 2. Postoperative coronary angiography, Right coronary artery LAO view. Occluded saphenous vein graft (small arrows), coronary artery ostial dissection (large arrow).

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