ENDOVASCULAR AND SURGICAL TECHNIQUES

Percutaneous Stenting of Proximal Subclavian Artery Occlusion

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Introduction

Percutaneous transluminal angioplasty of symptomatic proximal subclavian artery occlusion is well documented.\(^{1,2}\) Stenting has been reported only in patients with a residual stenosis or thrombotic material on the arterial wall.\(^{1}\) We report a case in which a proximal subclavian artery occlusion was stented primarily with the intention of improving the long term patency rate.

Case Report

A 49-year-old man presented with a 1-year history of left arm claudication. A Duplex scan suggested a proximal subclavian artery occlusion with a vertebral artery steal. This was confirmed by arteriography (Fig. 1). The patient proceeded to stenting of the first part of the subclavian artery with a Palmaz prosthesis via a brachial approach (Fig. 2). Following the procedure there was no residual gradient. The patient received acetylsalicylic acid 300 mg daily and heparin 5000 U intravenously peroperatively. He was fully warfarinised for 3 months postoperatively. He is asymptomatic at 6 months.

Discussion

Stenting of proximal subclavian artery occlusions has previously only been performed following angioplasty if there was a residual stenosis, or thrombotic material was identified on the arterial wall. We stented a proximal subclavian artery occlusion with the
intention of improving long-term patency as compared with angioplasty. The subclavian artery is of comparable size to the iliac artery and should therefore behave in a similar fashion. Recent results by Blum\textsuperscript{3} and Vorwerk\textsuperscript{4} indicated that iliac stenting achieves significantly better results than conventional angioplasty, and in larger vessels recurrence is due to progression of disease at a distal site rather than atherosclerosis or myointimal hyperplasia of the stented lesion.\textsuperscript{5} Intimal hyperplasia affects smaller vessels and we feel this is unlikely to play a clinically significant role in the subclavian artery.\textsuperscript{6,7} The risk of peripheral embolisation associated with primary stenting is in the order of 5%.\textsuperscript{4} Embolisation of the vertebral artery is less because flow reversal does not occur immediately following recanalisation of the subclavian artery but after several minutes.

References


Accepted 9 February 1994