XII. Indications for Percutaneous Transluminal Angioplasty

47. Special Indications for Angioplasty

F.-J. Roth and G. Cappius

Angioplasty has become an increasingly popular technique for treating stenoses and occlusions of the iliofemoral arteries [4, 18, 19, 23, 26–28], as well as the renal [7, 8, 11, 20, 22], the coronary [9], and the subclavian arteries [12–15].

Recent reports suggest a wide spectrum of applications for percutaneous transluminal angioplasty. Up to now stenoses of the visceral and the brachiocephalic arteries and of the abdominal aorta [17, 24, 29] have been described. Basically there are two less common applications of angioplasty: (a) nonatherosclerotic lesions and lesions following vascular surgery, and (b) atherosclerotic lesions with an unusual localization or an unusual radiographic appearance.

Nonatherosclerotic Lesions

Case Report

A 58-year-old woman suffered from severe claudication of both arms. She was no longer able to comb her hair. Arteriography revealed both brachial arteries (Fig. 1) to be duplicated, each with a significant stenosis in its proximal segment. Angioplasty was successfully attempted in both arms using the brachial approach (Fig. 1).

We also treated six brachial arteries in three other women with claudication of the arms due to an occlusion or a stenosis of the brachial arteries. In four cases we were successful and short-term follow-up (8–29 months) of two women demonstrated a good result. Both were asymptomatic, and the blood pressure and the oscillograms were normal.

Angioplasty of Venous Bypass Graft

If patients suffer from recurrent claudication following venous bypass graft, the arteriogram may reveal an occlusion of the graft, a stenosis of the graft, or occlusion of an artery proximal or distal to the bypass graft. In cases of long-standing occlusion of the graft angioplasty cannot usually be accomplished.
Fig. 1a–d. Arteriograms of brachial artery showing a stenosis of duplicated right brachial artery in the proximal segment, b patent right brachial artery after angioplasty, c stenosis of left duplicated brachial artery in the proximal segment, and d patent left brachial artery after angioplasty