Crossing coronary arteries

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Figure 1. The obtuse marginal arteries A and B continued as two arteries crossing over each other in right antero-oblique (RAO) -30° projection (arrow).

Figure 2. The obtuse marginal arteries A and B continued as two arteries crossing over each other in left antero-oblique (LAO) 90° projection (arrow).

A 73-year-old man was referred to the outpatient clinic because of an aortic stenosis and angina pectoris (NYHA class 2). An exercise stress test was abnormal suggesting ischaemia.

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Coronary angiography revealed significant lesions in the left anterior descending coronary artery and ramus circumflexus. The obtuse marginal artery continued as two arterial branches crossing over each other (figures 1 and 2). There was no angiographic evidence of bridging.

During coronary artery bypass grafting the course of the crossing obtuse marginal arteries was confirmed. The obtuse marginal artery A was crossing over the intramyocardial obtuse marginal artery B (figures 3A and 3B). Myocardial revascularisation of the anterior descending coronary artery with left internal mammary artery was performed. Saphenous vein bypass grafting from the ascending aorta to the obtuse marginal artery was also carried out. An Epic aortic bioprosthesis was inserted. No complications occurred.

Figure 3. The course of the crossing obtuse marginal arteries was confirmed during coronary artery bypass grafting. The obtuse marginal artery A was crossing over the intramyocardial obtuse marginal artery B (arrow).

It is generally accepted that the major branches of the coronary arteries do not cross, but run parallel to one another. Only a few cases of crossing coronary arteries have been previously published.¹⁻³ The incidence has

not well been described but seems very low. The coronary artery system presents a great variation with regard to origin, course and branching pattern.

The functional significance of crossing arteries is not known. It is unclear whether this is a coronary artery anomaly or a normal variation of the coronary anatomy. ■

In this section a remarkable 'image' is presented and a short comment is given.

We invite you to send in images (in triplicate) with a short comment (one page at the most) to Bohn Stafleu van Loghum, PO Box 246, 3990 GA Houten, e-mail: l.jagers@bsl.nl.

'Moving images' are also welcomed and (after acceptance) will be published as a Web Site Feature and shown on our website: www.cardiologie.nl

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