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IMAGES IN CARDIOLOGY

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Coronary angiography through the radial approach: passage through “Z” bend innominate artery

A 64 year old patient was admitted for elective coronary angiography for chronic stable angina. We proceeded through the right radial approach. After cannulating the radial artery, a 5 French sheath was inserted using a 0.038 inch guidewire and TIG 5 French (Terumo) catheter. While advancing the guidewire, it was observed that the wire was going towards the left shoulder rather than the ascending aorta. The innominate artery followed a tortuous course with acute angulation to the aortic arch, looking like a “Z” bend (panel A). As the guidewire was negotiated through the bend it was observed that the wire was going towards the descending aorta. We let the wire and the catheter proceed to the descending aorta initially. While pulling back in the left anterior oblique projection, the wire was brought inside the catheter lumen and the TIG catheter tip was kept facing medially towards the ascending aorta. The patient’s hand was brought more medially and the distal end of the

guidewire was kept straight to avoid inappropriate buckling of the wire–catheter assembly. At this position we were able to pass the guidewire medially, and subsequently the catheter was advanced into the ascending aorta (panel B). After reaching the aortic sinus the guidewire was withdrawn and by gentle torque both the coronary arteries were successfully cannulated.

Tortuous aortic arch branches and aortic arch may create problems in performing coronary angiography through the radial route. Judicious manoeuvring of the guidewire in negotiating the catheter across the bend helps to perform the angiogram safely and efficiently.

N M Gandhi
R N Chakraborty
M F Alamgir
drnmgandhi@hotmail.com