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Angioplasty is the medical term used to describe a procedure where arteries blocked by fatty plaque can be dilated. This is an especially important procedure as an artery that has been blocked by fat can often lead to a wide variety of heart-related conditions ranging from angina (chest pain) to full blown cardiac arrests (heart attacks).

During angioplasty, a catheter is inserted from the artery on the wrist (radial artery) or the groin (femoral artery) and used to cannulate the arteries around the heart. Once inserted, the catheter serve as the conduit for the delivery of the balloon used to mechanically unblock the artery; and once the arteries are successfully dilated, a stent is then placed in the artery as a scaffold to keep the artery open.

Although the technical procedure is largely the same, radial angioplasty has several advantages over femoral angioplasty as far as the patient is concerned. First of all, radial access is much safer as the bleeding rates – along with the risk of the patient developing a stroke – are known to be much lower. This is mostly due to the size of the radial artery, which is much smaller than that of the femoral artery and therefore much more easily compressed. In addition, radial angioplasty is also faster and more painless: a tight bandage over the wrist is far more comfortable than a tight bandage over the groin, and far less restrictive. Due to the location of the wound, patients who undergo femoral angioplasty must also be confined to the bed for a period of time to prevent the wound from reopening whenever they try to move.

However, radial angioplasty is not without its own share of disadvantages as well. Being much smaller than the femoral artery, it is technically more demanding than the femoral approach. Patients with very small radial arteries are also not suitable for radial angioplasty: in which case the catheter must be inserted through the



femoral artery instead.

Radial angioplasty is also a fairly new approach to angioplasty, which means that not many cardiologists are fully trained or competent in its use. While the situation would most likely change given time, right now only a handful of cardiologists are able to perform a radial angioplasty as quickly as they could an angioplasty performed through the femoral artery.

Although this added complexity makes many people think that it is not suitable for complex stenting procedure, this is not true: I have personally performed several complex procedures on completely blocked arteries via the radial approach.