

Case 25

A useful instrument in vascular surgery



(a)



(b)

Figure 25.1

Figure 25.1a shows a valuable instrument used in arterial surgery. Figure 25.1b is a close-up of its tip when inflated.

What is it called?

A Fogarty balloon catheter.

What was the status of the inventor when he designed it?

Thomas Fogarty* thought of this while he was a medical student, and his reputation was made by the time he became a surgical resident.

*Thomas Fogarty (b. 1934), surgeon, Portland, Oregon.

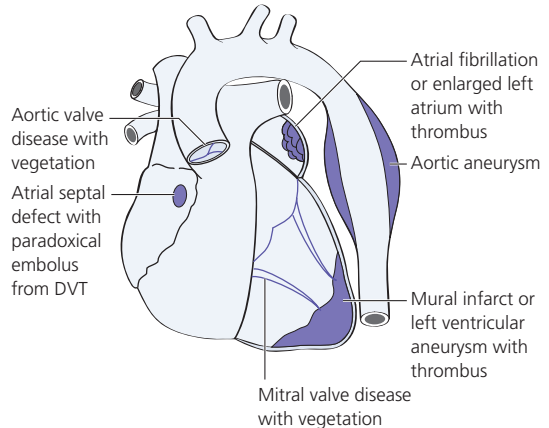


Figure 25.2 Sources of peripheral emboli. DVT, deep vein thrombosis.

What vascular emergency is it used for?

Its principal use is to remove an occluding embolus and propagated clot from a blocked peripheral artery. It is slid down the artery through a proximal arteriotomy, the balloon is then inflated and the catheter withdrawn, allowing the embolus and distal clot to be withdrawn. The procedure is repeated till all the occluding material has been removed, as shown by free back-bleeding.

What drug should be commenced at once by the intravenous route in this condition?

Intravenous heparin should be commenced at once to prevent further propagation of clot.

What is the most important prognostic factor in deciding the fate of the limb in a case of peripheral embolism?

The likelihood of success of embolectomy is inversely proportional to the time interval from the onset of the

block to the embolectomy. After 24 h have elapsed, successful disobliteration becomes unlikely. A limb that is unlikely to be viable even after disobliteration of the artery is characterized by the development of purpuric skin staining that does not blanch on pressure ('fixed staining').

What is the definition of an embolus?

An embolus is abnormal, undissolved material carried in the blood stream from one part of the vascular system to

impact in a distant part. While the embolus may comprise air, fat or tumour, it is usually thrombus which becomes detached from its source, usually in the heart or the major vessels. The common sources of embolism are shown in Fig. 25.2.