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The superficial femoral artery for arterial access. Comment on *Br J Anaesth* 2020; 125: e453–e455

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E-mail: graham.walker@ouh.nhs.uk**Keywords:** arterial catheter; embolisation; monitoring; superficial femoral artery; thrombus

Editor—I thank Dolan¹ for describing another route for arterial cannulation that will prove useful in difficult situations. However, I also offer a note of caution regarding the use of the superficial femoral artery (SFA) for arterial line placement. The SFA is an end artery supplying the lower limb below the knee and its terminal branches are susceptible to occlusion by emboli. Vascular surgeons, when reperfusing the leg after femoral/popliteal bypass grafting, always release the sling on the profunda femoris artery (PFA) first, so that debris is washed into the thigh muscles where small artery occlusion is of low consequence. This lesson was learnt in the 1960s when postoperative ‘trash foot’ was a common occurrence, with toes often infarcted.

In arteriopathies and older individuals the SFA is frequently calcified, which poses the hazard of dislodging debris that will embolise at the time of cannulation. We know that thrombus frequently forms at the tip of intravascular lines; flushing expels thrombus from the line, with resultant embolisation. Thrombus may also be dislodged as the line is withdrawn from the vessel and is then washed distally, thus risking infarction of distal structures.

Cannulation of any artery carries the risk of occlusion or embolisation of the vessel. Thrombus dislodged in the

common femoral artery (CFA) may embolise to the PFA or the SFA; the likelihood of the PFA being the route taken by the embolus is unknown. Emboli in the SFA go to the lower leg.

Complete occlusion at the site of cannulation is less likely in a larger diameter vessel. The consequences of arterial occlusion/embolisation should be less severe if end arteries are avoided. Cannulation of end arteries should be considered a secondary option.

This may be particularly relevant in cases of coronavirus disease 19 (COVID-19) where thrombus formation on or in lines is common in view of the hypercoagulable state in this disease, with a higher risk of embolisation or vessel occlusion.

Declarations of interest

The author declares that they have no conflict of interest.

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