

LIST DO REDAKCJI/LETTER TO EDITOR

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Venous access in lower extremity with an angulation of cannula**Surender K. Malhotra¹, Tanvir Samra²**¹ Professor, ² Resident – Department of Anaesthesia and Intensive Care, Postgraduate Institute of Medical Education and Research, Chandigarh, India

Peripheral venous cannulation is probably the most commonly performed invasive medical procedure in general and for the administration of anaesthesia in particular. The reported success rate of peripheral venous cannulation by personnel in emergency medical services is 98.3% [1]. However, in patients with chronic medical conditions, obesity and intravenous drug users, establishment of a peripheral venous access may pose difficulty [2].

Veins routinely considered ideal for peripheral cannulation are on the dorsal and ventral surfaces of upper extremity that include metacarpal, cephalic and basilic veins. In case of difficulty, alternative peripheral sites are the veins in the lower extremity on the dorsum of foot. Though not routinely preferred in adults due to risk of thrombophlebitis, these have to be considered in case of emergency or as a last resort. The principal named superficial veins of the lower extremity are the long and small saphenous veins with their numerous tributaries, that are the part of dorsal venous arch [3]. The anterior vein of the leg is one of the largest and most superficial tributary of the long saphenous vein and lies midway between the two malleoli. But difficulties are encountered in its cannulation due to the underlying bony prominence of the anterior border of tibia, lack of subcutaneous fat and almost 130° angulation of foot at the ankle joint. As a result, the axis of vein does not fall in line with that of the venous cannula. We suggest a simple modification in the technique for cannulation of such veins.

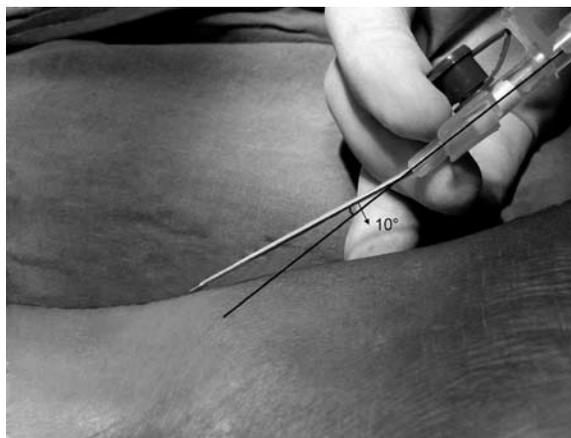


Figure 1. A 10° angulation at the hub of venous cannula

The shaft of the cannula is flexible and contains needle inside its lumen. A 10° angulation of the shaft, at its junction with the hub (Figure 1) aligns the axis of the cannula with that of the anterior vein of the leg. The near horizontal insertion minimizes the chances of counter-puncturing the posterior wall of the vein and also provides a longer intraluminal placement. In our experience, an angulation of more than ten degrees prohibits the smooth removal of the needle after advancing the cannula off the needle into the vein. Moreover, it increases the chances of accidental displacement of the cannula, while forcefully attempting to remove the needle. To maintain asepsis during the procedure, it is mandatory that angulation be made

before unsheathing the cannula from its covering. This simple technique is helpful in cannulation of all lower limb veins, particularly the anterior vein at the ankle joint.

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