

# Radial Artery Cannulation: Does Flexion at the Elbow Joint Matter?

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## Letter

Radial artery cannulation for invasive pressure monitoring is routinely done in the operation theatre and intensive care settings. Being a simple technique used initially exclusively for sampling and pressure monitoring, it has come a long way, to now also being used for assessing hemodynamic and vascular status. Ultrasound has made putting an arterial cannula relatively



Figure 1. Elbow in extension.

easy and safe [1], but hand and arm preparation and optimal positioning during the procedure cannot be undermined. We would like to share our experiences in putting arterial catheters during lumbar spine surgeries. Surgeries done in prone position offers unique challenges to the perioperative physician right from the start, which involves intubating on the trolley and taking care of all the pressure points, to name a few. Invasive blood pressure forms a pivotal part of the monitoring system, which involves meticulous planning and execution. Traditionally the wrist is placed in extension with an angle of around 45 degrees and the arm in a neutral position [2]. After induction of anesthesia, both the patient trolley and OT table lie side by side, making it difficult for the anesthesiologist to approach the cannulation site. We propose an approach/technique whereby the wrist is kept in an extended position, but the arm is also flexed at the elbow joint to at least 45 degrees so that the cannulation site is easy to approach and is more feasible (Figure 1). Available literature focuses on the use of ultrasound and the position of the wrist to facilitate radial artery cannulation [2,3]. Still, it has not been clearly mentioned about the optimal position of the elbow joint. Keeping it in the neutral position is being favored. Still, a problem arises where the site is difficult to approach as it commonly happens in surgeries where the patient is made prone, like during spine surgeries. As observed by us, the elbow joint flexion helps make it easy, feasible, and more practical. Raising the arm with the help of flexion allows the anesthesiologist better ergonomics and more aligned anatomy facilitating the overall procedure. In the end, we would like to highlight the importance of positioning the arm during the process, which should be flexed to 45 degrees to make the procedure easy and successful. Well-controlled RCTs would help to give more insight and clear the picture.

## References

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