

A dangerous clinical practice!

Sir,

We read with interest the case report by Srinivasan *et al*,^[1] in the April-June 2010 issue, on the importance of recognising inadvertent arterial cannulation during subclavian venous cannulation. We were surprised to read that after the arterial cannulation was recognised, the authors decided to remove the cannula by simply pulling it out. This practice, though often followed, can result in numerous life-threatening complications, including stroke, airway obstruction, massive bleeding, hemothorax, hemomediastinum, pseudoaneurysm formation and death.^[2,3]

Guilbert *et al*, reviewed all iatrogenic carotid or subclavian artery injuries occurring during central venous cannulation (CVC) over a 26-year period in three large institutions and identified 13 patients who were treated for catheter-related cervicothoracic arterial injuries. Five of these patients were treated by immediate catheter removal and manual compression, and all of them developed severe complications from the same, including death. The other eight patients were managed by an open surgical repair or endovascular approach and had successful outcomes. They also identified 30 other similar cases reported in the literature. Seventeen of these cases were treated with immediate removal of the cannula with manual compression, of which eight had major complications and two died. The remaining 13 were submitted to immediate surgical exploration and repair had successful outcomes.^[3]

In a five-year review of patients referred for surgical or endovascular management for inadvertent arterial catheterisation during CVC over a five-year period, by Pikwer *et al*, 11 inadvertent arterial catheterisations were recognised, and all patients underwent surgical or endovascular repair with no adverse outcomes even at the end of the 16-month follow-up period.^[4]

Guilbert *et al* have proposed an algorithm for the management of patients recognised to have cervical

or thoracic arterial injury, with a large bore cannula based on whether the site of suspected arterial injury is surgically accessible. If the cannula has been removed, all patients should undergo immediate imaging to evaluate arterial injury, prompt neurological evaluation and serial clinical follow-up for airway and neurological changes.^[3]

Thus, we would like to emphasise that if an inadvertent arterial puncture is detected during CVC, especially following dilatation and insertion of the cannula, it is prudent to leave the cannula in place while referring the patient for emergent endovascular or surgical repair.

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