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## Methods of Radial Artery Cannulation and Subsequent Arterial Occlusion

*To the Editor:*—The article by Jones *et al.*[1] on radial artery cannulation addresses an interesting practical question. Unfortunately, the design of their study does not allow them to resolve that question. Twenty-gauge Teflon® cannulae result in about a 5 per cent incidence of thrombosis.[2,3] To detect even a doubling of this rate (a reasonable clinical yardstick) at a 5 per cent probability level would require many hundreds more than the 40 patients studied. Thus, no objective conclusion can be drawn from their short report.

In 332 cardiac surgical patients, and using a variety of cannulae, we have reported that 30 per cent of patients had complete occlusion and 12 per cent had partial occlusion of the radial artery post-decannulation.[4] We observed a significant increase in occlusion if the artery were punctured on more than one occasion during attempted cannulation ($P < 0.01$) but no significant difference between the single wall and the transfixion techniques.

The latter data were not published and therefore are presented in table 1. In itself, even this may be criticized as the technique used was a matter of clinical chance rather than being strictly randomized.

We conclude that the choice of technique does not influence the subsequent incidence of thrombosis provided that cannulation is performed with reasonable proficiency. This supports the clinical impressions of Dr. Jones and his colleagues. By far and away the most important factor is the cannula itself. Despite the evidence available from several studies small-gauge Teflon® cannulae are still not used universally for percutaneous radial artery cannulation.

TABLE 1. Incidence of Occlusion of the Radial Artery Measured by Doppler Flow-meter and Modified Allen's Test One Day Post-decannulation in 314 Patients

| | Occluded | Partly Occluded | Patent |
|---|---|---|---|
| Single Wall | 57 | 21 | 125 |
| Transfixion | 38 | 15 | 68 |

There was no difference between the two cannulation techniques ($\chi^2 = 1.13$; $P > 0.2$).

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## Awareness during Fentanyl Anesthesia

*To the Editor:*—I wish to comment on several points raised in the recently published article by Sebel *et al.*[1]

Premedication with lorazepam in very adequate sedative doses in 30 of 39 patients suggests that the study was in effect one of the lorazepam-fentanyl combination, and not fentanyl alone as the title indicates. Benzodiazepines have been especially useful in the prevention of recall.[2]

As for the nine patients who received morphine premedication before fentanyl, the small size of this sample precludes the certain identification of any cases of awareness, as the incidence of this complication is, in itself, low.[3]

More importantly, however, the interview technique used may not have been adequate to detect awareness episodes. Most studies of awareness during anesthesia indicate that such patients are reluctant to identify themselves early[3] and often will not discuss it during hospitalization, reserving the first discussion of it for a surgical follow-up visit to the surgeon's office. Some fail to consciously accept it, and instead develop psychiatric symptoms.[4]