The role of the surgeon in the ICU

Sir,

I found it interesting reading about the Dutch College of Surgeons' concern (Vol 60(8), 1999, p. 556) about surgeons abdicating the traditional role of providing preoperative and postoperative care of the intensive care patients. This concern should be extended to the UK where surgeons pay only brief visits to the intensive care unit as part of their contributions to the surgical intensive care patient.

Of the three factors identified by Holcroft (1990) as negatively influencing the role of surgeons in the intensive care unit, the most important is inadequate training and knowledge. To deal with this problem, I make the following recommendations:

1. That the time spent in the intensive therapy post be increased from the present 3–4 months accepted by the Royal College of Surgeons (1998) to 6 months
2. That the higher surgical trainees who did not do an intensive therapy unit job as part of their basic surgical training should spend 6 months of their training in an intensive care unit post.

It is encouraging that the Surgical Royal Colleges greatly emphasize the development of skills and experience in the care of critically ill surgical patients (Royal College of Surgeons of England, 1998). However, it would be more commendable if the Care of the Critical Ill Surgical Patient course was made a mandatory requirement of the MRCS examination.

Coggins and de Cossart (1996) suggest that the inclusion of critical care into surgical training can only improve the standard of care delivered in general to all surgical patients, while heightening the trainee's awareness of its benefits. Commitment to this training remains an essential component of its success.

Austin Chukwu
Senior House Officer in General Surgery
Medway Hospital
Kent ME7 5NY

Coggins R, de Cossart L (1996) Improving post operative care: the role of the Surgeon in the High Dependency Unit. *Ann R Coll Surg Engl* **78**: 163–7
Holcroft JW (1990) Who should be responsible for the care of the critically ill surgically patients? *Arch Surg* **125**: 1103–4
Royal College of Surgeons of England (1998) *The Manual of Basic Surgical Training.* Royal College of Surgeons of England, London

Effective anticoagulation

Sir,

Your review on anticoagulation in atrial fibrillation in older people made interesting reading (Vol 60(6), 1999, p. 398). The last statement regarding compliance with correct dosage of warfarin cannot be overemphasized. I wanted to stress the point that anticoagulation clinics in some hospitals use only 3 mg strength of warfarin in multiples of 1.5 mg increment of decrement in the name of simplicity and safety. This practice is apt to leave as many as 35% of the people under or over anticoagulated. In modern times complex warfarin dosage on alternate days can be effectively accommodated by a 'weekly dispenser box'. This should be readily available to everybody over 75 years of age and/or those with impaired cognition.

S Vaidya
Staff Physician
Grantham and District Hospital
Grantham
Lincolnshire NG31 8DG

Percutaneous central venous catheter placement

Sir,

We would like to thank Dr John I Vrazas for an excellent article on central venous catheter placement (Vol 60(5), 1999, p. 337). We would like to add our experience, in the same context, with central venous catheter placement in neonates. In our neonatal unit at Sultan Qaboos University Hospital, Oman, we prefer to use percutaneous central venous catheter (PCVC) rather than surgically placed central lines, as PCVCs are reported to be more readily placed, cost-effective and associated with fewer complications than surgically placed central venous lines (Loeff et al, 1982; Grison et al, 1986; Mactier et al, 1986; Shulman et al, 1986; Sadiq et al, 1987).

The safety and effectiveness of PCVC in very low birthweight infants has also been established (Durand et al, 1986; Chathas et al, 1990). In the last 2 years a total of 44 very low birthweight infants were admitted to the neonatal intensive care unit in the author's hospital. Of these, nine (20%) had a PCVC inserted (*Figure 1*). There was one case of hydropneumothorax, and the remaining eight (88%) babies with PCVCs remained uncomplicated. PCVC insertion allowed successful nutritional enhancement, secure fluid delivery and decreased stress from the intervention of starting new intravenous lines. No complications, such as infection, thrombus, embolus or damage to vessels or organs, were noted.

The only disadvantage of PCVCs over surgical lines is that, because of their small gauge, they cannot be used for blood transfusions. This can be overcome by giving blood transfusions through a separate peripheral intravenous line. PCVCs can be safely and effectively used in small preterm infants and their use should be encouraged, instead of using surgically placed central lines.

Shabih Manzar
Senior Registrar
Neonatal Intensive Care Unit
Department of Child Health
Sultan Qaboos University Hospital
PO Box 38, Al-Khoud, Muscat
Sultanate of Oman

Chathas MK, Paton JB, Fisher DE (1990) Percutaneous central venous catheterization: three years' experience in a neonatal intensive care unit. *Am J Dis Child* **144:** 1246–50
Durand M, Ramanathan R, Martinelli B et al (1986) Prospective evaluation of percutaneous central venous silastic catheters in newborn infants with birth weights of 510 to 3,920 grams. *Pediatrics* **78:** 245–50
Grison ER, Mehta SK, Connars AF (1986) Thrombosis and infection complicating central venous catheterization in neonates. *J Pediatr Surg* **2l:** 772–6
Loeff DS, Matlak ME, Black RE et al (1982) Insertion of small central venous catheter in neonates and young infants. *J Pediatr Surg* **17:** 944–9
Mactier H, Alroomi LG, Young DJ et al (1986) Central venous catheterization in very low birth weight neonates. *Arch Dis Child* **61:** 449–53
Manzar S (1998) Unusual misplacement site of percutaneous silastic central venous catheter in a very low birth weight neonate. *Saudi Med J* **19(6):** 809–10
Sadiq HF, Devaskar S, Keenan W et al (1987) Broviac catheterization in low birth weight neonates: incidence and treatment of associated complications. *Crit Care Med* **15:** 47–50
Shulman RJ, Pokorny WJ, Martin CG et al (1986) Comparison of percutaneous and surgical placement of central venous catheters in neonates. *J Pediatr Surg* **21:** 348–50

Insertion of PCVCs was conducted with strict aseptic technique. The infant was placed on a radiant warmer in the neonatal intensive care unit and appropriately positioned and restrained as needed. Sedation was rarely necessary, but on a few occasions fentanyl 1 μg/kg was used. A neonatal instrument tray, as for use in umbilical artery catheterization, was laid out.

An insertion site was selected and the area was cleansed with povidone-iodine solution and alcohol. Surrounding areas were draped to create a sterile field. The 24-gauge Silastic catheter (Vygon) was flushed with normal saline and attached to a small syringe. After a sterile tourniquet was applied, a 19-gauge thin-walled butterfly needle (Vygon) was used for venipuncture. Before entering the vein, the needle was passed approximately 1 cm subcutaneously to give more stability to the needle position. When blood return was seen at the hub or the needle bevel was seen to be in the vein, the tourniquet was removed and the silastic catheter was passed through the introducer needle assisted by a small forcep. The catheter was further floated in a premeasured distance, aided by intermittent flushes of 0.1–0.2 ml normal saline from the attached syringe. When the desired distance was reached, the needle was removed by sliding over the catheter. Pressure was applied briefly to the puncture site to stop bleeding. The remaining catheter was coiled over the area and both the puncture site and catheter were covered with a sterile, transparent, adhesive dressing. A chest X-ray was taken to confirm the position of the catheter.

Maintenance

PCVCs were used exclusively for hyperalimentation or administration of intralipids or dextrose solutions. Medications were given via PCVCs, either by direct injection or by continuous infusion through a Y-port in the administration set. The initial dressing was only changed when nonocclusive or restrictive. Strict aseptic technique was followed by the nursing staff when taking care of the PCVCs.

Figure 1. Placement technique for percutaneous central venous catheters (PCVCs).