analysed by the Mann–Whitney U-test. There were no statistically significant differences in patient characteristic variables between the groups. After intubation and skin incision, right and left rSO$_2$ values were found to be significantly higher in Group PR than in Group SR ($P<0.05$). When intra-abdominal pressure was 8 mm Hg, the increase in the right and left rSO$_2$ values was significant in Group PR, when compared with Group SR ($P<0.05$). Haemodynamic parameters and SpO$_2$ values were not associated with these changes because they did not differ between the groups at all time periods ($P>0.05$). The incidence of cerebral desaturation (more than 20% decreases from baseline) was not observed. In addition, no significant difference was observed between the groups in terms of haemodynamic parameters and rSO$_2$ values during hypercarbia ($P>0.05$).

In conclusion, the effects of equipotent BIS doses of propofol and sevoflurane are associated with similar rSO$_2$ values during normocapnia and mild hypercapnia. However, in the periods in which stimulus is intense, propofol anaesthesia increased the rSO$_2$ values when compared with sevoflurane anaesthesia likely caused by decreased cerebral metabolic rate of oxygen consumption and therefore reduced oxygen requirements.

**Declaration of interest**

None declared.

P. Sen
S. Izdes*
A. But
Ankara, Turkey
*E-mail: sevalizdes@yahoo.com

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**Ultrasound-guided anterior sciatic nerve block in the proximal thigh: an in-plane approach improving the needle view and respecting fascial planes**

Editor—The anterior approach to the sciatic nerve (SN) is an ergonomic method of providing anaesthesia of the lower limb in combination with a femoral nerve block. The SN in the proximal thigh is located medial to the femur in the fascial plane between the adductor magnus and gluteal muscles. Ultrasound-guided (USG) anterior SN block is often undertaken using an in-plane (IP) approach in which a needle is advanced from a position immediately medial or lateral to a curvilinear, low-frequency (2–5 MHz) transducer (Fig. 1). This steep insonation angle often prevents a clear view of the needle tip as the SN is approached at an average depth of up to 10 cm (Fig. 1). Furthermore, this needle trajectory passes through the adductor muscle group, close to the major vessels of the lower limb and the obturator nerve (ON) (Fig. 1). An alternative IP anterior approach to the SN in the proximal thigh which improves the needle view and avoids the major neurovascular structures is described. With the hip abducted and the knee flexed, the SN is identified in the proximal thigh using a 2–5 MHz curvilinear transducer (C60, Sonosite, Bothell, WA, USA). A measurement is taken from the skin to the SN viewed in the middle of the ultrasound (US) image. The needle enters the skin on the medial aspect of the thigh at this distance immediately below the midpoint of the transducer in the plane of the US beam and advanced towards the SN (Fig. 2). This needle trajectory is almost perpendicular to the US beam as the SN is approached, thus enhancing visualization of the needle tip and accuracy of local anaesthetic deposition (Fig. 2). The medial to lateral needle trajectory also avoids the femoral vessels and the profundal femoral vessels running between the femur and the lateral aspect of the SN. Although colour probe Doppler may help identification of these vessels, it is not infallible and is limited by technical factors, including blood viscosity, transducer frequency, and insonation angle. This USG approach to the SN described here has been successfully undertaken in 120 patients with a mean age and BMI of 64.7 yr (SD 11.3) and 31.8 (SD 5.8), respectively. The SN block was completed within a mean time of 4 min 32 s (SD 1 min 52 s). The minimum threshold current for SN stimulation was 0.33 mA (SD 0.08). Vascular puncture was avoided in all cases. US identification of the SN can be difficult to visualize in some patients. USG deposition of local anaesthetic in a fascial plane has recently been described to block the ON in the proximal thigh. The needle trajectory described here respects the fascial plane between the adductor magnus and gluteal muscle groups, offering an alternative method for placement of local anaesthetic when the SN is not clearly visible. The USG anterior approach to the SN remains challenging. Enhancing the needle view, avoiding major vasculature, and utilizing the available tissue planes
may assist in improving the success and popularity of this
technique while avoiding potential complications.

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J. Dolan*

Glasgow, UK

*E-mail: johndolan@nhs.net

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