are not successful, we may have to critically examine the expense and effort involved in using perineural catheters. Alternatively, perhaps it is time to re-focus our efforts to other means of delivering long-acting analgesia with nerve blocks, rather than continuing to deliberate on technical and equipment considerations. If current studies on the use of sustained-release local anaesthetics (e.g. liposomal bupivacaine) for nerve blocks yield positive results, a precise, ultrasound-guided single injection of such agents may be the future.6 7

**Declaration of interest**

A.H. has consulted and advised for Skypharma, GE, Sonosite, Codman & Shurtleff, Inc. (Johnson and Johnson), Cadence, Pacira, Baxter, and BBraun Medical. His recent industry-sponsored research include Glaxo Smith-Kline Industries, Pacira, Baxter. A.H. is an equity holder at Macosta Medical USA.

M. Levine*
M. Latmore
C. Vandepitte
J. Godsden
A. Hadzic
New York, USA
*E-mail: mattlevine14@gmail.com

3 Ilfeld BM, Morey TE, Wright TW, Chidgey LK, Enneking FK. Continuous interscalene brachial plexus block for postoperative pain control at home: a randomized, double-blinded, placebo-controlled study. Anesth Analg 2003; 96: 1089–95

doi:10.1093/bja/aeu069

**Factors affecting perineural catheter dislocation rates**

Editor—We read with interest the article by Marhofer and colleagues investigating dislocation rates of perineural catheters (PNCs) in a volunteer study. As described, PNCs are often positioned in clinical practice to facilitate perioperative anaesthesia and analgesia and thus, studies into their efficacy are often designed to assess perioperative pain. We agree that PNC dislocation is an important, yet poorly investigated, reason for failure of PNC anaesthesia or analgesia. We are however disappointed to find that, in our opinion, important information was omitted in the methodology of this otherwise well-designed study.

The technique described for insertion of the PNCs is an out-of-plane technique aiming to achieve passage under the fascia covering nerve structures as the needle tip entered the US beam. Catheters were advanced 3 cm beyond the tip of the needle and then retracted until appropriate spread of LA was seen around the nerve. The authors do not provide detail as to how far the catheter was in fact under the fascia in each case. We would be interested to see whether in the dislocated cases, the actual catheter length under the fascia was shorter than in the cases where dislocation did not occur. We would hypothesize that a catheter placed parallel to the femoral nerve with <2–3 cm under the fascia iliaca is likely to dislodge with full hip flexion, being pulled out of the fascial plane to lie superficial to the fascia as the authors describe. We would further suggest that a catheter inserted perpendicular to the nerve would be less likely to be dislodged with exercise because less pull is being exerted on the catheter itself. In 2010, Wang and colleagues2 showed that catheters positioned parallel to the nerve have a higher insertion failure rate than those positioned perpendicular to the nerve; interestingly, they also showed significantly quicker insertion times for perpendicular catheters.

The relatively low rate of dislocation reported for interscalene catheters may be because shoulder movement itself has less direct anatomical influence on neck structures; if subjects had been instructed to perform lateral neck flexion, thus exerting a direct pull on the catheter, the dislocation rate may well have been higher. Again we hypothesize that with an in-plane technique at the level of the supravclavicular trunks, positioning a catheter from posterior to the upper trunk to lie under the investing fascia may help to prevent dislocation. This topic would make for further interesting studies and we thank the authors for undertaking this novel work.

**Declaration of interest**

None declared.

J. Francis*
C. Egeler
Swansea, UK
*E-mail: francisja@cardiff.ac.uk


doi:10.1093/bja/aeu064