Figure 2 Local anesthetic spread on ultrasound.

Conflicts of interest

The authors declare no conflicts of interest.

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Superior gluteal nerve block: a cadaveric study to evaluate the optimal injection site

Bloqueio do nervo glúteo superior: estudo com cadáveres para avaliar o local ideal da injeção

Dear Editor,

We read with interest the report by Sá et al. of an ultrasound-guided gluteal nerve block that involved placement of the ultrasound probe caudal to the iliac crest and cephalical to the greater trochanter.[1] The Superior Gluteal Nerve (SGN) innervates the Gluteus Minimus (GMin), Gluteus Medius (GMed), tensor fascia latae and piriformis muscles. These muscles can be injured during surgical procedures, and pain and/or tension in these muscles occasionally cause extreme distress to patients. Therefore, the SGN block or hydrodissection procedures provide potent analgesic effects in not only surgical anesthesia but also outpatient procedures. However, there are some ambiguities with regard to the orientation of the probe and needling technique; we believe that it is necessary to simplify the procedure in order to make the block a generally useful procedure. The aim of our study was to determine an anatomically optimal injection site for the SGN block and demonstrate the spread of the local anesthetic solution in Thiel-embalmed cadavers.

SGN originates in the sacral plexus and runs through the suprapiriform foramen accompanied by the superior gluteal artery and vein. It runs in the fascial plane between the GMin and GMed muscles and provides branches to these muscles as well as the tensor fascia latae muscle. Therefore, accurate identification of both the GMin and GMed muscles while performing an ultrasound-guided SGN block is necessary. Accordingly, we proposed a new probe position, which was the midpoint of the line connecting the posterior superior iliac spine and the superior end of the greater trochanter (Fig. 1A), and injected water-based acrylic dye at this point in four Thiel-embalmed cadavers.

Ethical approval for the study was provided by the Institutional Ethics Committee of Okayama University Medical School (Approval number: 1608-004). The cadavers were placed in the prone position and bilateral SGN blocks were performed (total seven blocks; one of eight specimens was excluded because of poor condition). A 6–15 MHz linear probe was placed on the midpoint of the line. The needle was introduced via an in-plane approach (Fig. 1B), and 10 mL of blue dye was injected into the fascial plane between the GMed and GMin muscles (Fig. 1C). Subsequently, the cadavers were dissected.

In all seven procedures, spread of the blue dye was restricted to a small area between the GMed and GMin muscles, although SGN showed blue staining (Fig. 1D and E). In one specimen, the dye spread through the suprapiriform foramen and stained both the sciatic nerve and SGN. The sciatic nerve was not stained in the other six procedures.

Thus, we proposed a new probe position for the SGN block by using the posterior superior iliac spine and greater trochanter as landmarks. Dye injection at this site resulted in staining of SGN in all assessed specimens. In addition, the sciatic nerve was unexpectedly stained in one specimen.

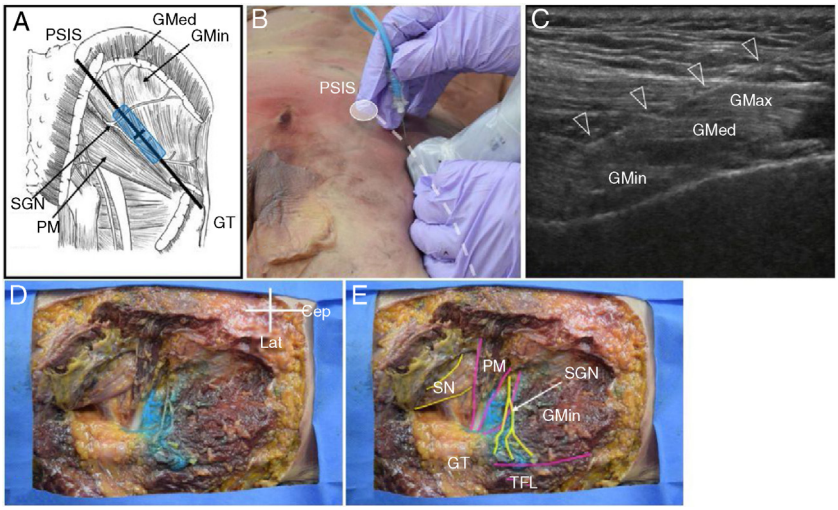

Figure 1 Optimal injection site for the superior gluteal nerve block. (A, B) New probe position for the superior gluteal nerve block. (C) Ultrasonographic view of the superior gluteal nerve block at this point. (D, E) Photographs showing the spread of dye in a cadáver. The gluteus maximus and gluteus medius muscles are dissected. (Cep, Cephalad; Lat, Lateral; Gmax, Gluteus Maximus Muscle; GMed, Gluteus Medius Muscle; GMin, Gluteus Minimus Muscle; GT, Greater Trochanter; PM, Piriformis Muscle; PSIS, Posterior Superior Iliac Spine; SGN, Superior Gluteal Nerve; SN, Sciatic Nerve; TFL, Tensor Fascia Latae muscle).

This could be a limitation, particularly for outpatient procedures. Moreover, this is a cadaveric study involving a limited number of samples. Further clinical trials to determine the volume of injectate are warranted.

Conflicts of interest

The authors declare no conflicts of interest.

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Awake nasal fibre optic intubation — a simple manoeuvre for easy navigation of the fiberscope through the nasopharynx

Intubação nasal guiada por fibra óptica em paciente acordado — uma manobra simples para facilitar a navegação do fibroscópio através da nasofaringe

Dear Editor,

Awake nasal Fibre Optic Intubation (FOI) is the technique of choice in an anticipated difficult airway and therefore an essential skill set in an anaesthesiologists armamentarium. However, it takes time to acquire and develop the skills needed to perform a FOI. One of the primary skills in the initial training period is the ability of the endoscopist to navigate the fiberoptic scope in the right direction i.e. the glottis. The correct technique to achieve this is by looking for the ''dark airspace'' and directing the scope towards it. This is often difficult because of upper airway closing on the scope leading to loss of visibility or a ''Red out''. The novice endoscopist then feels lost with no sense of direction. This loss of visibility of the airway space is commonly encountered in the narrowest part of the pharynx called the nasopharynx or the retropalatal airway. This problem is often exaggerated in patients with obesity or obstructive sleep apnea who may be the ideal candidates for an awake nasal FOI. Obese individuals often have excess fat deposits at the level of the palatapharynx which may cause dis-