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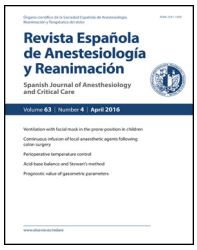

CASE REPORT

Use of genitofemoral and ilioinguinal and iliohypogastric nerve block during orchiectomy in a post-lung transplant patient. A case report☆

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KEYWORDS
Lung transplant;
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Testicular surgery

Abstract The case is presented of a post-lung transplant patient, ASA III, proposed for orchiectomy due to testicular cancer. A combination of iliohypogastric (ILH), ilioinguinal (ILI) and genitofemoral (GF) nerve block together with sedation was used as anaesthetic technique.

The inguinal area received sensory innervation mainly from ILI, ILH and GF nerves. The genital branch of the GF nerve supplies innervation to skin of the anterosuperior portion of the scrotum.

When performing the echo-guided block of GF nerve, it is necessary to identify the spermatic cord, and administer the local anaesthetic on the inside and periphery of the cord.

Peripheral nerve blocks are a valid option for complex patients. Its main advantage is the anaesthesia and analgesia level that it provides without the haemodynamic instability associated with general or neuraxial anaesthesia. GF nerve block provides hemi-scrotal anaesthesia, allowing manipulation and intervention in the inguinal-scrotal area, complementing the anaesthesia provided by ILI and ILH nerve blocks.

PALABRAS CLAVE
Trasplante pulmonar;
Bloqueo genitofemoral;
Bloqueo ilioinguinal;

Uso de bloqueo genitofemoral en combinación con bloqueo ilioinguinal e iliohipogástrico para orquiectomía en paciente postrasplantado pulmonar. A propósito de un caso

Resumen Presentamos el caso de un paciente postrasplantado pulmonar, ASA III, propuesto para orquiectomía por neoplasia testicular. La técnica anestésica era la combinación de bloqueo iliohipogástrico (ILH), ilioinguinal (ILI) y genitofemoral (GF) con sedación.

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Bloqueo iliohipogástrico; Cirugía testicular

El área inguinal recibe inervación sensitiva principalmente de los nervios ILI, ILH y GF, la rama genital de este último inerva piel de la porción anterosuperior del escroto.

Al realizar el bloqueo ecoguiado del nervio GF, es necesario identificar el cordón espermático y administrar anestésico local por dentro y por fuera para cubrir variaciones anatómicas del nervio.

Los bloqueos periféricos son una opción factible para pacientes complejos. Su principal ventaja es la anestesia y analgesia del área sin la inestabilidad hemodinámica asociada a la anestesia general y neuroaxial. El bloqueo del nervio GF aporta anestesia hemiescrotal, lo que permite la manipulación e intervención sobre esta área, complementando la anestesia aportada por el bloqueo de los nervios ILI e ILH.

Introduction

Organ transplantation has gone from being an exceptional intervention to the standard treatment for some serious diseases.[1]

The steady increase in the number of lung transplant patients in recent years, coupled with improved survival rates, increases the likelihood of encountering such patients in clinical practice, and it is essential to determine the status of the other organs and the patient's usual medication.[2,3]

Transplant patients may live far from the hospital in charge of their follow-up, and may require a surgical procedure unrelated to the transplant. A number of different anaesthesia techniques have been used in such patients, but none has been found to be superior.[1,3]

Ultrasound-guided nerve block is emerging as a useful option. The technique has several advantages: it provides analgesia during the intra- and postoperative period, and in certain cases can be used instead of general or neuraxial anaesthesia in order to avoid the potential complications inherent to these procedures in patients with multiple pathologies.[3]

We present the case of a post-lung transplant, ASA III patient sent for orchiectomy for testicular cancer, in whom a combination of iliohypogastric (ILH), ilioinguinal (ILI) and genitofemoral block (GF) was used for anaesthesia.

Case report

This was a 46-year-old man scheduled for left orchiectomy due to seminoma, weight 93 kg, height 169 cm, with single lung transplantation 1 year previously due to pulmonary sarcoidosis. He had a history of orchidopexy in adolescence, chronic kidney failure secondary to immunosuppressants and amphotericin B, steroid-induced diabetes, and arterial hypertension.

The preoperative work-up showed mild thrombocytopaenia (130,000 platelets) and chronic kidney disease (creatinine 1.36 g/dL). The remaining tests were unremarkable. Chest computed tomography showed postoperative changes due to left-sided single-lung transplantation, irregular, patchy, poorly defined consolidations in some segments of the lung graft. Right lung involvement was observed, in the form of ground glass opacities associated with a reticular pattern and traditional cylindrical bronchiectasis related to the underlying disease. Spirometry reported moderate bronchial obstruction, with FEV1 of 51%. An echocardiogram performed 6 months post transplantation showed preserved biventricular function and ejection fraction of 72%, slightly dilated right ventricle, with no notable valvular disease, pulmonary artery pressure not estimable, with no indirect indication of pulmonary hypertension. The pretransplant echocardiogram reported severe pulmonary hypertension.

The patient was given antibiotic prophylaxis 30 min before the surgical incision. Standard monitoring with continuous electrocardiogram, blood pressure and pulse oximetry was performed.

Nasal cannulas were placed, delivering 3 L min oxygen, and sedation began with midazolam (2 mg) and perfusion of 0.05 mcg/kg/min remifentanil. We performed ultrasound-guided left-sided ILI and ILH block at the level of the groin, using a high frequency linear transducer and 50 mm needle inserted in-plane lateral to medial, with the medial part of the transducer facing the navel. We administered 15 ml of 0.5% bupivacaine, and observed the spread of the local anaesthetic (LA) between the internal oblique and transversus abdominis muscles.

We then performed blockade of the genital branch of the left genitofemoral nerve, placing the transducer transversely, 2–3 cm lateral to the pubic symphysis, parallel to and above the inguinal ligament, where we identified the spermatic cord. The needle was inserted out-of-plane, administering 2 ml of 0.25% bupivacaine into the cord. The needle was then withdrawn to the edge of the cord, and the same dose of LA was administered (Fig. 1). Sedation continued with target-controlled infusion of 0.07 mcg/kg/min remifentanil combined with 0.7 mcg/ml propofol, which was maintained throughout the procedure.

Surgery lasted about 45 min and was uneventful, with the patient under spontaneous ventilation and no sudden changes in vital signs, arterial pressure at a steady 70–80 mmHg, heart rate at 70–85 beats per minute and SpO_2