Rev Bras Anestesiol. 2015;65(4):306–309

REVISTA BRASILEIRA DE ANESTESIOLOGIA
Official Publication of the Brazilian Society of Anesthesiology
www.sba.com.br

CLINICAL INFORMATION

Bilateral subdural hematoma secondary to accidental dural puncture

Sofía Ramírez*, **Elena Gredilla**, **Blanca Martínez**, **Fernando Gilsanz**

Servicio de Anestesiología y Reanimación, Hospital Universitario La Paz, Madrid, Spain

Received 25 May 2014; accepted 4 July 2014
Available online 28 April 2015

KEYWORDS
Accidental dural puncture;
Epidural analgesia;
Post-dural puncture headache;
Subdural hematoma;
Epidural blood patch

Abstract
We report the case of a 25-year-old woman, who received epidural analgesia for labor pain and subsequently presented post-dural puncture headache. Conservative treatment was applied and epidural blood patch was performed. In the absence of clinical improvement and due to changes in the postural component of the headache, a brain imaging test was performed showing a bilateral subdural hematoma.

The post-dural puncture headache is relatively common, but the lack of response to established medical treatment as well as the change in its characteristics and the presence of neurological deficit, should raise the suspicion of a subdural hematoma, which although is rare, can be lethal if not diagnosed and treated at the right time.

PALAVRAS CHAVE
Dura-Máter;
Analgesia epidural;
Cefaleia pós-punção dural;
Hematoma subdural;
Placa de sangue epidural

Hematoma subdural bilateral secundário a punção dural acidental

Resumo
Apresentamos o caso clínico de uma paciente de 25 anos de idade, na qual uma técnica peridural foi realizada durante o trabalho de parto e posteriormente apresentou cefaleia com características de cefaleia pós-punção dural. Foi iniciado tratamento conservador e tampão de sangue peridural. Devido a ausência de melhora clínica e à mudança do componente postural da cefaleia, decidiu-se realizar um exame de imagem cerebral que demostrou a presença de hematoma subdural bilateral.

A cefaleia pós-punção dural é relativamente frequente, mas a falta de resposta ao tratamento médico instaurado, assim como a mudança em suas características e a presença de foco

* Corresponding author.
E-mail: sofiramirez@gmail.com (S. Ramírez).

http://dx.doi.org/10.1016/j.bjane.2014.07.017

neurológico, devem levantar a suspeita de presença de um hematoma subdural que, embora infrequente, pode chegar a ser devastador se não for diagnosticado e tratado oportunamente.

Introduction

The post-dural puncture headache (PDPH) is the most common complication after a neuroaxial[1] anesthesia. In turn, the subdural hematoma (SDH) is a rare, but potentially severe complication of dural puncture, which requires early diagnosis and treatment. Initially the diagnosis of SDH is complicated because the early symptoms are similar to those of PDPH, but when the headache does not respond to standard medical treatment, losing its postural characteristics or being accompanied by other neurological disorders, it is necessary to suspect of an intracranial pathology and urgently perform a neuroimaging scan to allow diagnosis and correct treatment.

Clinical case

A 25-five-year-old woman, gesta three at 39th week of gestation, was admitted to hospital due to early uterine activity. Her personal history pointed out that in her first birth she did not receive epidural analgesia due to impossibility of performing the technique. With a cervical dilation of 2 cm, and after gynecological evaluation, the patient requested epidural analgesia to control labor pain. With prior explanation of the risks, and after signing informed consent, an epidural technique was performed. After various attempts, using a 18 G Tuohy needle and loss of resistance to air, the epidural space was located at L3–L4 and the catheter was left in this position. Following a negative aspiration test, a dose test of 3 mL bupivacaine 0.25% with epinephrine 1: 200,000 was administered with no hemodynamic changes or immediate sensory or motor blockade. The initial dose was 0.25% levobupivacaine 10 mL and then an epidural infusion of 0.125% levobupivacaine + fentanila 2 $\mu g\,mL^{-1}$ at 10 mL h^{-1} was connected.

Labor was uneventful and 2 h later, after eutocic birth, a girl of 3090 g was born with Apgar score 8 at 1 min and 9 at 5 min. After staying for surveillance in postpartum area, the epidural catheter was removed, and the patient went to the room.

With 24 h postpartum the anesthesia service was called because the patient had severe headache, with appreciation of pain in simple verbal scale (SVS) 9/10, which worsened with standing position and improved when recumbent. Although dura mater puncture has not been noticed, there was suspicion of a possible PDPH and with this supposed diagnosis analgesic treatment was started with paracetamol 1 g IV/6 h and dexketoprofen 50 mg IV/8 h. After 48 h of headache onset, due to persistent symptoms despite medical treatment administered and diagnosis of PDPH, epidural blood patch (EBP) was performed with no other events. Initially, the results were satisfactory, since the patient reported improvement in headache during the first hours, but the next day she showed non-orthostatic headache, with maximum intensity in the supine position, in SVS 10/10 associated with tinnitus and cervical contracture. Due to lack of clinical improvement, with change of headache characteristics and after ruling out neurological focus on physical examination, brain and lumbar spine nuclear magnetic resonance (MRI) was ordered, which showed bilateral intracranial SDH (Figs. 1 and 2). The Neurosurgery Service was consulted, indicating treatment with IV corticosteroids (dexamethasone 4 mg IV every 8 h) and requesting computed tomography (CT) control in a week.

With 24 h of treatment initiation with corticosteroids, the patient reported improvement in headache, SVS 3/10 and after 48 h she reported no headache or other symptoms. The patient remained in hospital for another week for medical treatment and medical supervision. Control cranial CT showed improvement of lesions and due to satisfactory progress, with total remission of headache and without the presence of neurological focus, she was discharged with corticoid oral treatment in a descending regimen during 20 days and control by neurosurgery service.

Discussion

The incidence of accidental dural puncture described in the literature after performance of an epidural technique varies from 0.4 to 6%,[2] but only 60% of patients develop PDPH.[3] In our anesthesia service at Maternal Hospital La Paz numbers

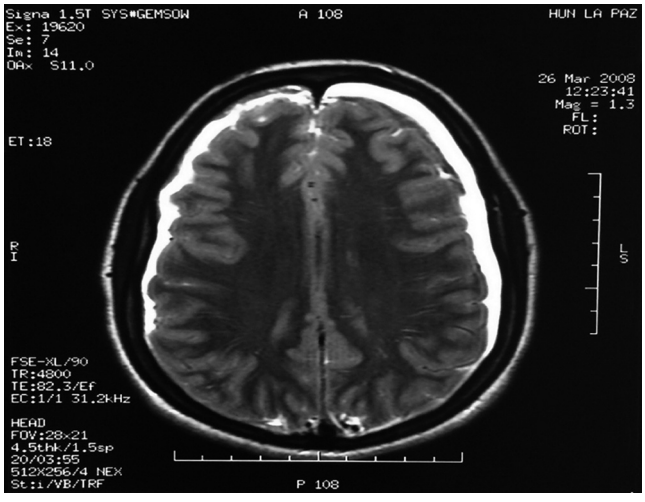

Figure 1 Axial section of brain magnetic resonance where a bilateral subdural hematoma is observed.