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Case report

Retained epidural catheter: A rare complication. Report of two cases☆

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ABSTRACT

Introduction: Inserting a catheter into the epidural space is an anesthetic technique, not exempt from complications. Catheter knotting and retention are rare complications.
Clinical findings, diagnostic evaluation and interventions: Two cases of epidural catheter-associated complications are discussed. The first was due to the development of a spontaneous knot and the second due to retention and then rupture; both cases required surgical removal.
Conclusion: To prevent these potential complications, refrain from passing excessive catheter length and do not leave more than 5 cm of catheter into the epidural space. If a catheter cannot be easily removed, try using several maneuvers and if these fail or there is any pain or paresthesia, diagnostic imaging is required to locate the catheter and request neurosurgery support.

Catéter epidural retenido. Complicación poco frecuente. Reporte de dos casos

Palabras clave:
Anestesia epidural
Catéteres

RESUMEN

Introducción: La inserción de un catéter en el espacio epidural es una técnica anestésica que no está exenta de complicaciones. El anudamiento y la retención de un catéter son complicaciones poco frecuentes.

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Espacio epidural
Complicaciones posoperatoria
Rotura

Hallazgos clínicos, evaluación diagnóstica e intervenciones: Presentamos dos casos de complicaciones asociadas al catéter epidural. El primero debido a la formación de un nudo espontaneo y el segundo por retención y posterior ruptura. Los dos casos requieron extracción quirúrgica.

Conclusión: Para evitar estas posibles complicaciones no pasar en exceso el catéter y no dejar más de 5 cm del catéter en el espacio epidural. Si un catéter no puede ser fácilmente retirado se pueden intentar extracción de este usando varias maniobras, si estas son infructuosas o si hay dolor o parestesias, se debe ubicar el catéter con imágenes diagnósticas y solicitar apoyo de neurocirugía.

Introduction

Epidural anesthesia is a widely used technique that consists in the neural block of thoracic, lumbar and/or sacral segments. According to the indication, local anesthetics are administered into the epidural space with a single injection or preferably via a catheter,[1] with a test dose beforehand.[2] A catheter insertion in the epidural space entails the potential risk injuring the dura mater, development of hematomas, abscesses, neurological injury, or catheter misplacement.[3] Knotting of an epidural catheter is a rare complication.[4] An epidural catheter retention without knotting is even rarer.[5]

Clinical case 1

A 25-year-old woman, housewife, mestizo, with unremarkable family history, denies allergies or toxic substance abuse. She had a diagnosis of Bartholin's gland abscess and was scheduled for drainage. Blood and coagulation time tests were normal. The anesthetic technique selected was epidural block. Using non-invasive monitoring in the OR, and a left lateral decubitus approach for the L2-L3 lumbar space with Tuohy No 18 needle and the loss of resistance with air technique the epidural space was localized 4 cm away. A test dose of 3 ml of 2% lidocaine was administered, with no changes in the physiological variables, so the rest of the dose was injected after 1 min, administering 50 μg of fentanyl, upon introducing the catheter to the 14 cm mark. At the end of the procedure the patient was moved to a left lateral decubitus position for catheter removal, but there was a strong resistance and an anchoring sensation with a skin lump when pulling the catheter (Fig. 1). Three anesthesiologists made several attempts, with the patient in various positions, but it was impossible to remove the catheter. Due to the suspicion of catheter knotting, a neurosurgeon was consulted. During a second surgical phase and under local anesthesia, the neurosurgeon followed the catheter trajectory, dissected the tissues down to the ligamentum flavum, and pulling softly and consistently managed to remove the catheter; a knot was found at the catheter tip (Fig. 2). The patient was then taken to the recovery room and once the anesthetic effect cleared, she was transferred to her room where she stayed for 24 h to continue with the administration of antibiotics and Ciprofloxacin 400 mg IV every 12 h. The patient experienced no parestesias, pain or any other symptoms. She was discharged 24 h later, with oral antibiotic management and Ciprofloxacin and a gynecology control appointment in seven days time.

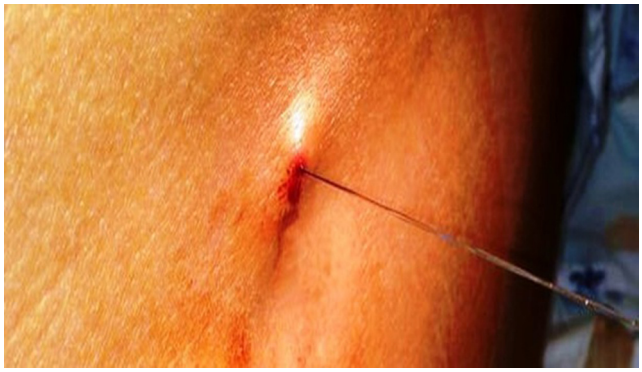

Fig. 1 – Epidural catheter removal by one of the anesthesiologists, showing resistance and skin lump.
***Source*: Authors.**

Clinical case 2

A 38-year-old woman, housewife, mestizo, 34 weeks into pregnancy. Her GyOb history indicated 5th gestation, 2 deliveries,

Fig. 2 – Epidural catheter removed, showing a knot at the tip that prevented withdrawal.
***Source*: Authors.**