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Órgano de difusión científica de la Academia Mexicana de Cirugía
Fundada en 1933
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CLINICAL CASE

Clinical presentation of a dorsal epidural arachnoid cyst after an epidural anaesthesia☆

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Received 11 December 2014; accepted 6 August 2015
Available online 1 December 2016

KEYWORDS
Spinal arachnoid cysts;
Spinal cord compression;
Clinical outcome;
Surgical treatment

Abstract
Background: Arachnoid cysts are dural diverticula with liquid content similar to cerebrospinal fluid, with 1% occurring in the spinal cord. They locate mainly in the dorsal region of the thoracic spine, and are unusual causes of spinal cord compression.
Clinical case: The case is presented of a previously healthy 15-year-old boy, with a 20-month history of spastic paraparesis that started apparently after epidural block for ankle osteosynthesis. There was decreased sensitivity and strength of the pelvic limbs and gradually presented with anaesthesia from T12 to L4 dermatomes, L5 and S1 bilateral hypoaesthesia and 4+/5 bilateral strength, in the L2 root and 2+/5 in L3, L4, L5, S1, hyperreflexia, Babinski and clonus, but with no alteration in the sacral reflexes. In the magnetic resonance it was diagnosed as an extradural arachnoid cyst from T6 to T9. The patient underwent a T6 to T10 laminotomy, cyst resection, dural defect suture, and laminoplasty. One year after surgery, the patient had recovered sensitivity, improvement of muscle strength up to 4+/5 in L2 to S1, and normal reflexes.

☆ Please cite this article as: Obil-Chavarría CA, García-Ramos CL, Castro-Quiñonez SA, Huato-Reyes R, Santillán-Chapa CG, Reyes-Sánchez AA. Presentación clínica de quiste aracnoideo epidural dorsal posterior a anestesia epidural. Cir Cir. 2016;84:487–492.

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Conclusions: After the anaesthetic procedure, increased pressure and volume changes within the cyst could cause compression of the spinal cord, leading to symptoms. Despite being a long-term compression, the patient showed noticeable improvement.

PALABRAS CLAVE
Quistes aracnoideos espinales;
Compresión medular;
Evolución clínica;
Tratamiento quirúrgico

Presentación clínica de quiste aracnoideo epidural dorsal posterior a anestesia epidural

Resumen
Antecedentes: Los quistes aracnoideos son divertículos de duramadre con contenido similar al líquido cefalorraquídeo. El 1% se presenta en la médula espinal; se localizan típicamente en la parte posterior de la médula espinal torácica y son una causa rara de compresión medular.
Caso clínico: Se presenta el caso de un paciente masculino de 15 años, previamente sano, quien acude a valoración por paraparesia espástica de 20 meses de evolución, la cual comienza después de un evento anestésico por osteosíntesis de tobillo. Presenta disminución de la sensibilidad y fuerza de miembros pélvicos, que se incrementa gradualmente hasta presentar anestesia a nivel de dermatomos T12 a L4, hipoestesia L5 y S1 bilateral y fuerza 4+/5 bilateral, en la raíz L2 y 2+/5 en L3, L4, L5, S1, hiperreflexia, Babinski y clonus, sin alteraciones en los reflejos sacros. Mediante resonancia magnética se diagnostica quiste aracnoideo extradural de T6 a T9. Se realizó laminotomía T6 a T10, resección del quiste, cierre del defecto dural y laminoplastia. En el seguimiento a 12 meses el paciente presenta recuperación de la sensibilidad, mejoría de la fuerza muscular hasta 4+/5 en L2 a S1 y normorreflexia.
Conclusiones: Después de la anestesia espinal se produjeron cambios en la presión del líquido cefalorraquídeo y expansión del quiste, lo que desencadenó el déficit neurológico, haciendo evidente su presencia. A pesar del tiempo que se mantuvo la compresión, el paciente presentó una adecuada evolución clínica.

Background

Arachnoid cysts make up 1% of spinal tumours and are defined as diverticula of the dura mater, of the arachnoid or of a nerve root sheath and result from the accumulation of a fluid similar to cerebral spinal fluid (CSF) in the extradural or intradural space.[1–5] They are found dorsal to the spinal cord and have been reported in the posterolateral and anterior position.[2,6,7] At thoracic level, the spinal canal is relatively small in diameter, and therefore the cysts very frequently present symptoms.[7–9]

The case is presented of an athletic, previously asymptomatic teenage patient, presenting with progressive neurological deficit in the pelvic limbs, following administration of an epidural anaesthetic for osteosynthesis of the right ankle.

Clinical case

A 15-year-old male patient attended with a 20 month history of spastic paraparesis. On examination he reported that he had been previously healthy with normal psychomotor development. The patient had suffered a fracture to his ankle after direct trauma 20 months previously, which required surgical management with lumber epidural anaesthesia, in a hospital in the north of the country. The patient had lost strength and had developed sensitivity in his pelvic limbs with sensory alteration in his trunk, which the doctors who were treating him attributed to the ankle injury. The patient was reassessed 40 days after surgery by a doctor who attributed the symptoms to poor cooperation on his part and suggested rehabilitation. During these months, his functional limitation affected his daily, sporting and school activities. He reported no alterations in bladder and bowel habits.

The patient's strength gradually lessened, making walking and standing up difficult, which lead to his consulting our institution. On physical examination he was able to walk independently with the help of a walker with front wheels. Initial contact on bilateral forefoot supported on the bilateral medial bar, weak push-off and propulsion phases, steppage pattern, trunk antepulsion, hip semiflexion, *recurvatum* of both legs, ample support base.

He presented exteroceptive hypaesthesia in all its forms in the root of T11, anaesthesia of T12 to L4 and bilateral hypoaesthesia L5 and S1. His strength was affected bilaterally with 4+/5 on Lucille Daniel's scale in root L2 and 2+/5 in