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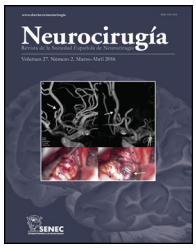

Review article

Spinal sinovial cysts: Surgical treatment and clinical outcomes in a series of 18 cases☆

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ABSTRACT

Object: A series of 18 patients with symptomatic synovial cysts was analysed from May 2009 to November 2013. Different approaches were performed for their removal.
Material and methods: The study included 18 patients, 8 men and 10 women, aged between 50 and 77 years. An analysis was made of the variables including age, gender, symptoms, imaging studies, histopathology, surgery, follow-up, complications, and clinical outcome.
Results: An articular synovial cyst was diagnosed in 17 cases, and a ganglion in one cases. The most common symptom was back pain with radiculopathy (94%). Motor deficits occurred in 4 cases (22%), and 1 case (5%) presented with urinary incontinence. The most common level was L4-L5 (67%), with one atypical case observed in the D12-L1 location. Hemi-laminectomy was performed in 14 cases, with 9 of them having an interspinous spacer (ISP) device inserted. A laminectomy with a fusion procedure was performed in 3 patients and 1 patient had a bilateral decompression using a unilateral approach. The patients were followed-up for between 6 months to 2 years.
Conclusions: Synovial cysts are a cause of radiculopathy/neurogenic claudication. Spinal cysts are commonly found at the L4-L5 level. MRI is the tool of choice for diagnosis. The most common symptom was back pain with radiculopathy. Synovial cysts resistant to conservative therapy should be treated surgically. In our series, surgical resection of symptomatic juxtafacet cysts showed a good clinical outcome, but the optimal approach for patients with juxtafacet cysts remains unclear.

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Quistes articulares espinales: evolución clínica y resultados según intervención quirúrgica. Revisión de 18 casos

Palabras clave:
Quistes articulares
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RESUMEN

Objetivo: Se realiza un análisis retrospectivo a partir de una serie de 18 casos con quistes articulares sintomáticos, tratados quirúrgicamente mediante distintos abordajes para su extirpación desde mayo del 2009 hasta noviembre del 2013. Se muestran los resultados obtenidos con cada uno de los abordajes a medio y largo plazo.

Material y métodos: Se incluye a 18 pacientes, 8 varones y 10 mujeres, de entre 50 y los 77 años. Se recogen de cada uno de ellos los síntomas, antecedentes, estudios por imagen, histopatología, intervención quirúrgica, seguimiento, complicaciones y resultados.

Resultados: Diecisiete casos fueron diagnosticados de quiste articular sinovial y un tuvo como resultado ganglión. El síntoma más común es la lumbalgia con radiculopatía (94%). La pérdida de fuerza se registró en 4 casos (22%) y un caso (1%) se acompañó de alteración de esfínteres. El nivel más frecuente fue L4-L5 (67%). Recogimos un caso en locación atípica D12-L1. Se practicó una descompresión unilateral del canal en 14 casos mediante hemilaminectomía, colocándose en 9 de ellos dispositivo interespinoso; en 3 casos se realizó laminectomía y artrodesis, y en uno solo se realizó un abordaje unilateral con descompresión bilateral del canal. Todos ellos tuvieron un seguimiento mínimo de 6 meses y máximo de 2 años.

Conclusiones: Los quistes articulares son una causa de radiculopatía/claudicación neurógena. La localización más frecuente es el nivel L4-L5 y la forma más frecuente de presentación la lumbalgia con radiculopatía. La resonancia magnética lumbar es la prueba de elección para su diagnóstico. Los quistes articulares refractarios a tratamiento conservador serían subsidiarios de cirugía. En nuestra serie, la extirpación quirúrgica del quiste muestra un buen resultado clínico a medio-largo plazo, si bien la heterogeneidad del grupo y el número de casos no permiten escoger un abordaje óptimo para su resolución. El mejor abordaje quirúrgico para el tratamiento de los quistes articulares sigue siendo controvertido.

Introduction

Ayberk von Gruker was the first to describe synovial cysts in 1880 during an autopsy.[1] In 1885, Baker described the process by which these form next to joints.[2] In 1950, Vossschulte and Borger[3] described the first case of synovial cysts with radicular compression. Kao et al.[4] coined the term juxtafacet cyst to group synovial cysts and ganglion cysts. While they do have histological differences, clinically their difference is not significantly important.[5]

The aetiology of synovial cysts is still unknown. Although some cases could be related to a previous trauma, most of them could be due to a degenerative process. A statistically significant association has been shown between synovial cysts and diseases such as osteoarthritis or spondylolisthesis.[2] Most synovial cysts in our series were located at the L4-L5 level, in line with previous studies. Location in other vertebral segments includes L5-S1 and L3-L4. Cysts at the cervical level are uncommon, appearing in the more mobile segments, such as C5-C6 and C7-T1. In our series, we reported a case at the thoracic level, which is also very rare.

In symptomatic synovial cysts, lumbar pain is the most common symptom found in the literature (range 50–93%), which may be accompanied by uni- or bilateral radicular pain (range 57–100%). They are followed in frequency by neurogenic claudication (range 10–44%), sensory and/or motor deficits and impaired reflexes. Cauda equina syndrome has also been described in relation with this pathology.[5] Magnetic resonance imaging (MRI) continues to be the best tool for its diagnosis in correlation with the symptoms of the patient. The treatment of choice for this pathology is still the subject of debate. In this study, we evaluated the clinical result of 18 cases of patients diagnosed with symptomatic synovial cyst who were treated surgically using various approaches for its removal between May 2009 and November 2013.

Methods

Between 2009 and 2013, 18 patients (10 females and 8 males) aged between 50 and 77 years old (average age, 65 years old) were diagnosed and treated for symptomatic synovial cyst in the Neurosurgery Department at Hospital Universitario La Paz in Madrid. All of them had a lumbar MRI for their diagnosis, with the sequences prescribed according to protocol. Data on the presence of symptoms (lumbar pain by the visual analogue scale [VAS], radiculopathy, claudication, motor and/or sensory deficit, cauda equina syndrome), radiological findings,