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Case report of a retropharyngeal synovial cyst originate from atlantoaxial joint and review of the literature

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ABSTRACT

Synovial cysts of the atlantoaxial joint are rare entities [1] and could possibly grow in any direction and compress adjacent structure. Synovial cysts of the atlantoaxial joint have been associated with atlantoaxial instability because of trauma or chronic inflammation. They could grow in the retropharyngeal space, lateral to the spine or towards the spinal canal either epidural or intradural and cause progressive myelopathy [2]. Rarely synovial cysts could cause acute clinical symptoms because of hemorrhage [5]. In this article, we present a case report of a 72 years old man presented with subtle upper neck pain and after cervical MRI (Magnetic Resonance Imaging) has been diagnosed with a retropharyngeal cystic mass originating from atlantoaxial arthrosis. Patient treated conservatively with analgetic medication. Neck pain went off without remission and there was no relapse during the last 5 years of follow up. Repeated cervical MRI revealed no change of the cyst size and morphology and patient remained asymptomatic. Atlantoaxial instability was not present in flexion extension x-rays. Laboratory results for rheumatoid arthritis were negative.

Keywords: synovial cyst, retropharyngeal cyst, atlantoaxial arthritis

Introduction

Synovial cysts of the atlantoaxial joint are rare entities and could possibly grow in any direction and compress adjacent structure. Synovial cysts of the atlantoaxial joint have been associated with atlantoaxial instability because of trauma or chronic inflammation. They could grow in the retropharyngeal space, lateral to the spine or towards the spinal canal either epidural or intradural and cause progressive myelopathy [2], [4], [6], [7], [8], [9], [13], [15], [19]. Rarely synovial cysts could cause acute clinical symptoms because of hemorrhage.

Materials and Methods

We present a case report of a 72 years old man presented with subtle upper neck pain and after cervical MRI (Magnetic Resonance Imaging) has been diagnosed with a retropharyngeal cystic mass originating from atlantoaxial arthrosis. Patient treated conservatively with analgetic medication. Neck pain went off without remission and there was no relapse during the last 5 years of follow up. Repeated cervical MRI revealed no change of the cyst size and morphology and patient remained asymptomatic. Atlantoaxial instability was not present in flexion extension x-rays. Laboratory results for rheumatoid arthritis were negative.

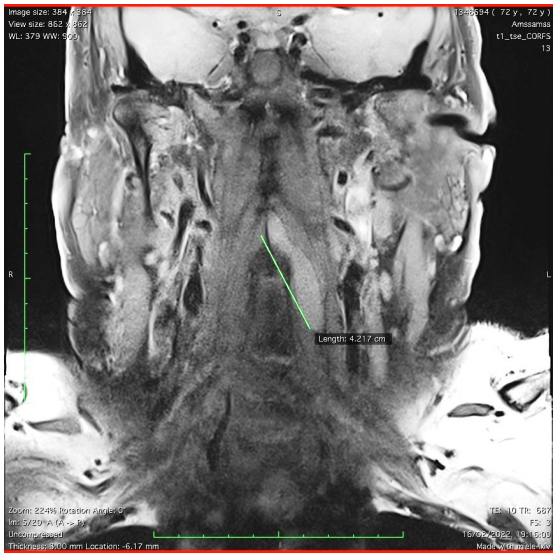

Figure 1 Coronal image of a left synovial paraspinal cyst

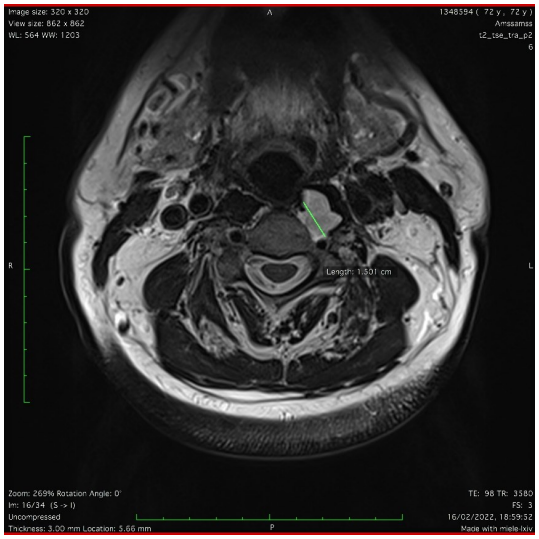

Figure 2 T2 transverse image of the synovial cyst

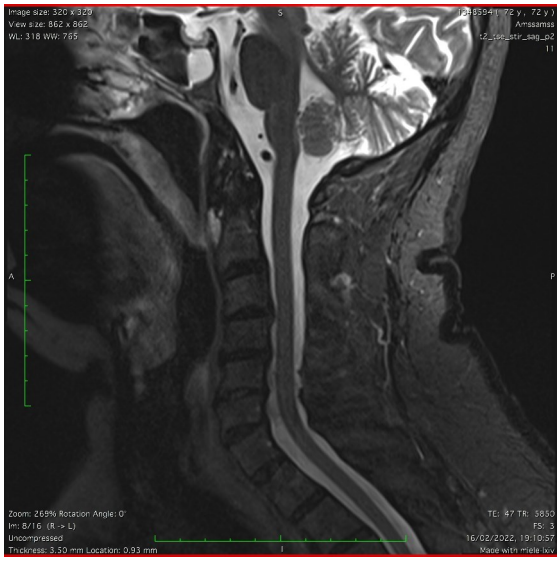

Figure 3 T2 Sagittal image of the synovial cyst

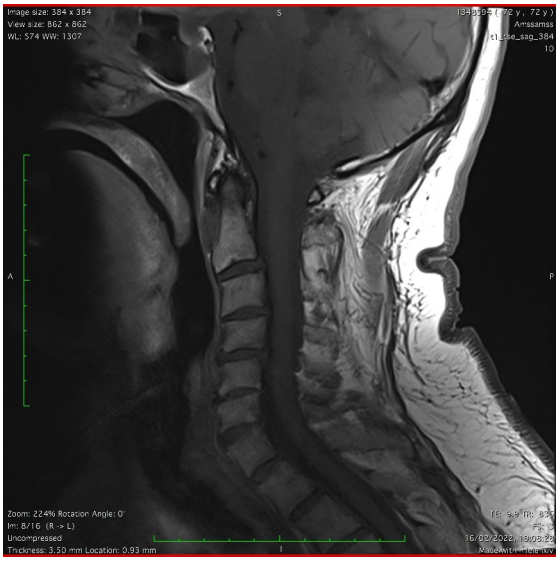

Figure 4 T1 sagittal image of the synovial cyst

Results

Patient remained symptom free without pain remission for the last 5 years of follow up. No other inflammatory condition or arthritis have been diagnosed. There was not any evidence of atlantoaxial instability.

Discussion

Cervical synovial cysts although a rare pathology should be considered in the differential diagnosis of paraspinal and intraspinal cystic masses [1]. Depending on which structures are compressed by the cyst expansion a variety of symptoms could occur with myelopathy regarded as the most serious of them. Myelopathy could occur in a chronic subtle manner or acutely in case of cyst hemorrhage [5]. Cranial nerve compression syndrome because of hypoglossal nerve compression has been also reported in the literature [3]. Myelopathy [2], [4], [6], [7], [8], [9], [13], [15], [19], or atlantoaxial instability are the main indication of decompression with or without fusion of the atlantoaxial joint or fusion alone as the only therapeutic modality [11]. Trans oral or transnasal approaches of atlantoaxial syno-

vial cyst excision have been proposed [14], [15], [17],[18] for spinal cord decompression.. Anterior trans oral resection has been combined with posterior fusion in three studies [12], [14], [15] Posterolateral [19] approach or anterolateral [13] without fusion have been also described. Atlantoaxial joint puncture and arthrography has been proposed as a minimally invasive treatment method of a symptomatic retro-odontoid synovial cyst [10].

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