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*RESEARCH ARTICLE*

# VERTEBRAL HYDATIDOSIS: UNUSUAL CAUSE OF MEDULLARY COMPRESSION

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## *Abstract*

We present a case of a 30-year-old woman, without any notable pathological history, admitted with a slow spinal cord compression. The spinal MRI showed an extensive cystic lesion from D8 to D11 compressing the spinal cord with signs of myelopathy, costal and paraspinal soft tissues invasion, compatible with vertebral hydatidosis. The surgical procedure was a decompression by laminectomy and incomplete cystectomy with osteosynthesis. histological analysis confirmed the diagnosis of vertebral hydatidosis. vertebral location remains rare, but severe, of delayed diagnosis due to the absence of specific clinical signs, it is evoked by radiology and confirmed by histological analysis. Its prognosis remains poor with frequent recurrences. The optimal treatment is the prevention of the disease.



## Introduction:-

Hydatid cyst is the development in humans of the larval form of echinococcus granulosis. It affects bone in 0.5 to 2% of cases, half of which are in the spine. The purpose of reporting this case consists of the rarity of the vertebral localization and the gravity of its prognosis.

## Observation:-

30-year-old female, without a previous pathological history, admitted with a progressive onset of paraplegia. Spinal magnetic resonance imaging showed a large vertebral, paravertebral, and intramedullary mass extending from D8 to D10 **(Figure1)**containing multiple daughter vesicles in T2 hypersignal, T1 hyposignal, rounded oval, confluent, separated by septas, mimiking a "grape cluster" appearance, with bone lysis, and spinal cord invasion from D7 to D11**,**costal and paraspinal soft tissues invasion**(Figure2)**suggesting vertebral hydatidosis. Chest radiograph showed a posterior mediastinal mass, without pulmonary localization, and liver ultrasound was normal. Medical treatment with albendazole was intiated followed by surgical decompression by laminectomy and cystectomy with osteosynthesis. histological analysis confirmed the diagnosis of vertebral hydatidosis.

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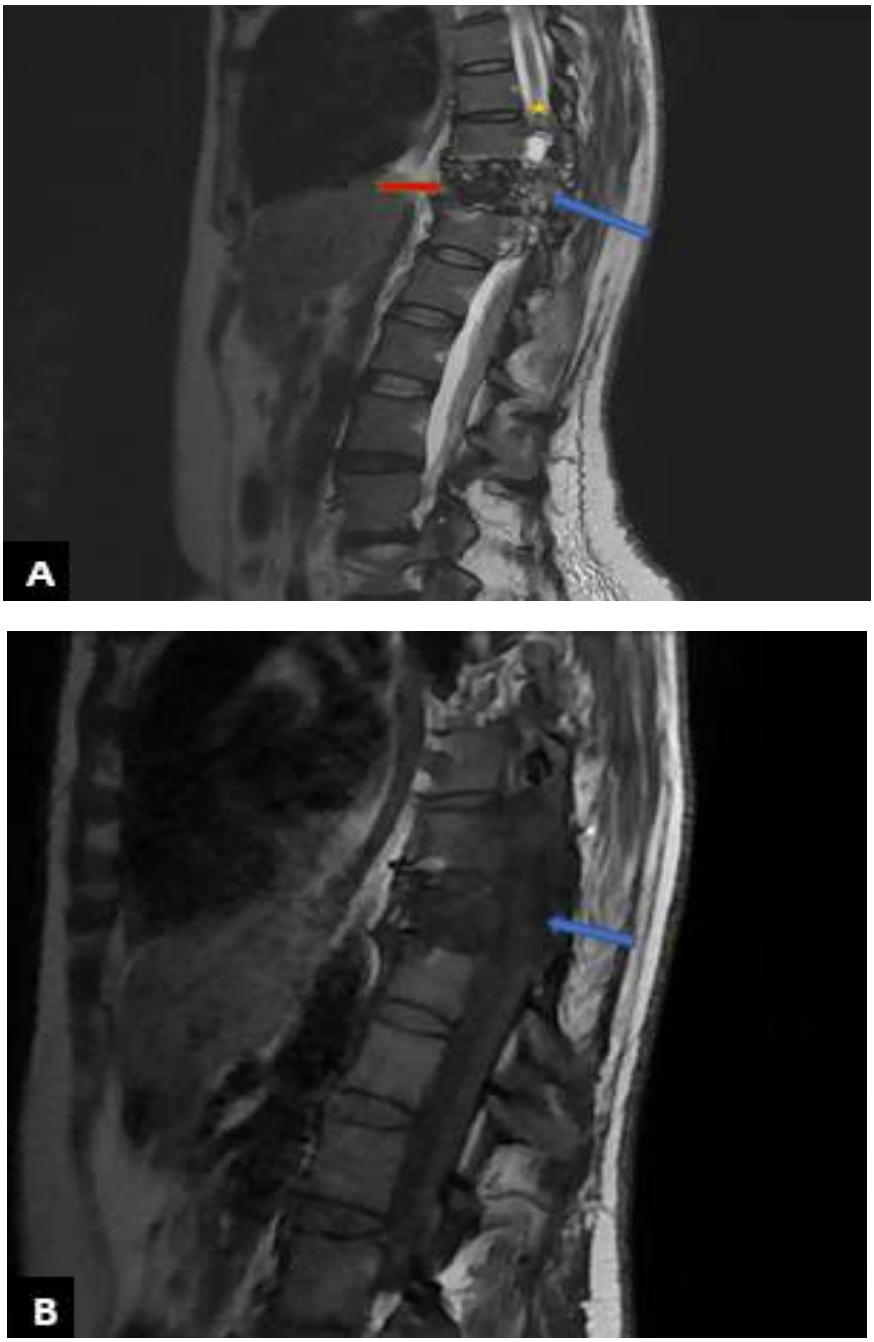


**Figure 1:-** Spinal MRI in sagittal section showing a heterogeneous and multivesicular dorsal mass in T2 hypersignal (A), T1 hyposignal (B), infiltrating the CV of D9 (red arrow) with intracanal extension (blue arrow) and spinal cord compression (star).

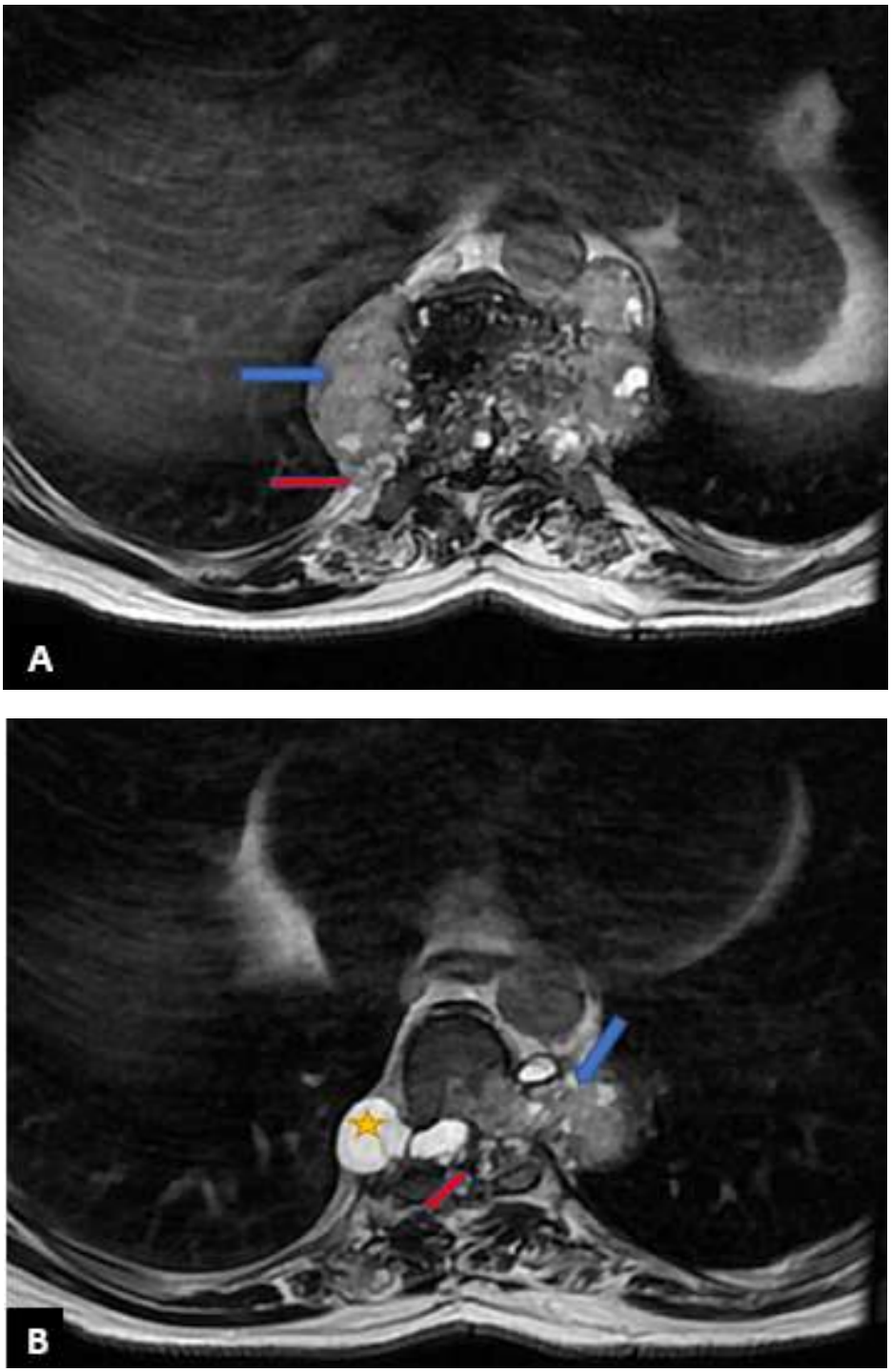


**Figure 2:-** Spinal cord MRI T2 sequence in axial section, showing a large mass of the dorsal spine containing vesicular images in T2 hypersignal (yellow star) with paravertebral extension (blue arrow A-B), and costal extension (red arrow A) causing spinal cord compression (red arrow B).

## Discussion:-

Vertebral hydatidosis is a rare anthropozoonosis and represents only 1 to 2% of all localizations. It is the most frequent and most serious localization of bone hydatidosis (45%). It is due to the development in humans of the larval form of a cestode of Echinococcus granulosis species. The preferred sites are the liver and lung [1].

The localization of the vertebral bone is often primitive, explained by the richness of the vascularizationof the vertebral bone. Dorsal location is the most common, followed by the lumbar one and rarely at the cervical level [2].

Bone echinococcosis has a latent and insidious character. It can remain silent for decades [3], the disease generally appears in adulthood around the age of 40 with nonspecific functional signs, or with neurological complications related to extensive bone infiltration with preservation of general health. The first clinical signs are usually spinal pain, signs of neurological complication, and in a more advanced stateacute spinal cord compression.

Radiologically, standard radiography may show a posterior circumscribed paravertebral opacity. CT scan shows hypodense images, more or less well limited, of variable size and shape, with a density lower than that of the bone [6]. Magnetic resonance imaging is currently the gold standard for any spinal cord compression; it studies the intracanal contents, appreciates the degree of spinal cord suffering and specifies the relationship of the hydatid vesicles with the dural sheath [4]

Vertebral hydatidosis can be seen in imaging in the initial phase as one or more central or lateral lacunar images with unclear boundaries, rounded or oval, confluent, separated by septas, mimiking a "grape cluster" appearance. More rarely, a patch of osteolysis without clear boundaries or a polycyclic macrogéodic image. All components of the vertebra can be affected. The initial lesion is usually located in the vertebral body. It is most often circumferential and can extend to the coast, which suggests a diagnosis of hydatidosis.

The prolonged preservation of the overall shape of the vertebra and of the thickness of the disc, despite sometimes extensive lesions, constitutes an important element of diagnostic orientation. The disc stays for a long time without being infested. It can collapse despite being infested [5].

Histopathological analysis of kerosene sections after standard staining with hemathein-eosin-safran (HES) confirms the diagnosis of hydatitosis

The treatment is surgical and consists of the most complete excision of the spinal and extra-spinal lesions. The indication and the result of the surgery depend on the location and extent of the lesions, as well as the presence or absence of complications [4]. Medical treatment with anthelminthic drugs has not yet been proven in vertebromedullary locations.

Recurrences are very frequent (30-40%) and mortality is between 3 and 14% of cases[6].

Ideally, prophylactic measures should be developed at all levels of the epidemiological chain.

## Conclusions:-

Vertebral location of hydatid cysts is rare but serious dueto its consequences on the functional and vital prognosis. Diagnosis is often late due to the absence of specific clinical signs. The treatment is surgical, but the best treatment is prevention of the disease.

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