

# Recurrent Calcified Hydatid Brain Cyst: Case Report

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## Abstract

The cerebral localization of the hydatid cyst is rarely observed in the brain (0.5–4.5%). The calcified hydatid brain cyst is exceptional and occurs in less than 1%. We report an observation in our department of 25 years old woman with a history of surgery for hydatid brain cyst at the age of 8 years hospitalized for progressive left hemiparesis. Brain CT scan and MRI showed a temporo-parietal calcified mass with right temporal horn extension. The mass was removed in semi-elective procedure revealed a well capsulated calcified hydatid cyst. The clinical evolution was marked by massive intraventricular hemorrhage evident on postoperative scan. The calcified cerebral hydatid cyst remains a rare entity. Its symptomatology is non-specific hence, its diagnosis requires help of past medical history and neuro-imaging. It for sure poses therapeutic difficulties.

**Keywords:** Hydatid Cyst; Brain; Calcifications

## Introduction

Hydatidosis or echinococcosis is an endemic parasitosis, known since ancient times [1]. It is observed all over the world and especially in sheep-rearing countries. It can affect all organs, especially the liver (60% of cases) and the lung (30% of cases) . Brain localization remains rare (1 to 4% of cases) . Calcified cerebral hydatid cyst is exceptional [2]. We report in this work a case collected in our department, and we discuss through this observation and the review of the literature the physiopathology of calcifications and the diagnostic and therapeutic difficulties they can generate.

## Case Report

A 25-year-old women with a history of surgery for hydatid cyst at the age of 8 years was hospitalized in the neurosurgery department for the management of seizures and progressive onset

of left hemiparesis. The examination showed a conscious patient, in good general condition apyretic, with left hemiparesis, without signs of intracranial hypertension or other associated signs. CT scan and Cerebral MRI performed with contrast showed a calcified mass in relation to the right ventricular junction measuring 6.1 cm x 4.3 cm and not showing enhancement after injection of gadolinium (Figures 1 & 2). The biological assessment and the fundal exams were normal, as well as the x-ray of the thorax and the abdominal ultrasound. The hydatid serology was negative. The surgical treatment consisted of a right parietal craniotomy. At the opening of the dura mater, calcified hydatid cyst and cerebral gliosis were discovered. Block ablation of the cyst was performed (Figure 3). The postoperative course was unfavorable, marked by massive intraventricular hemorrhage evident on post-operative scan. The patient has benefited external ventricular drain on 2nd post op day and the patient died on 6th post-operative day.

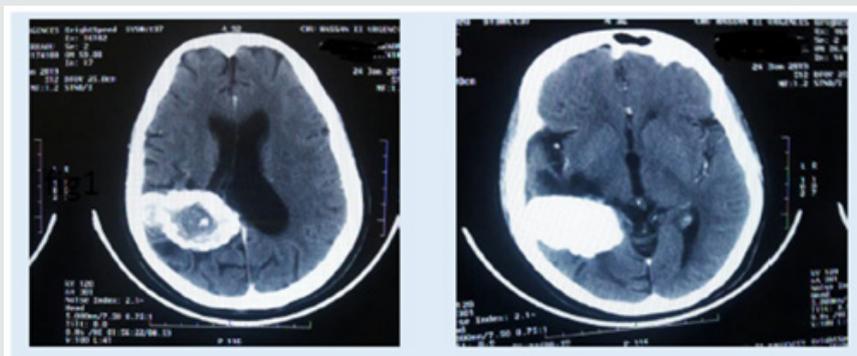
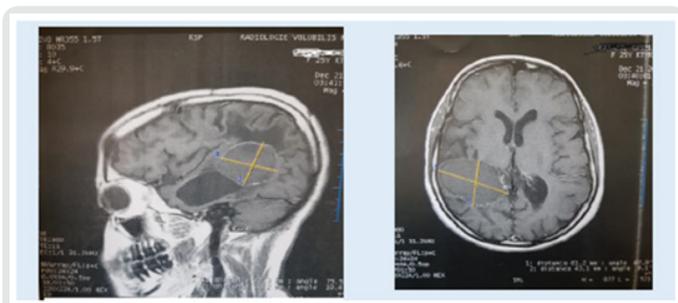
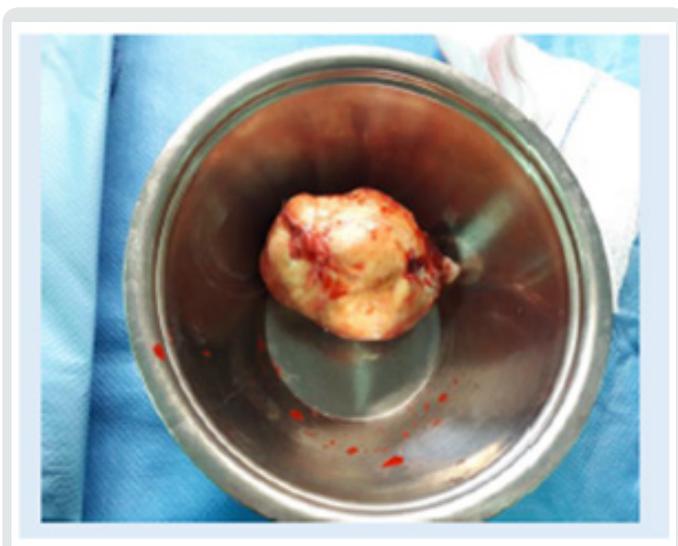


Figure 1: CT images show calcified right parietal lesion.



**Figures 2A & 2B:** A: T1-weighted sagittal MRI showed a calcified mass in relation to the right ventricular junction.

B: T2-weighted axial MRI not showing enhancement after injection of gadolinium.



**Figure 3:** operative part removed in block.

## Discussion

Hydatidosis is common in developing countries and constitutes a real public health problem. Brain localization is rare[3] (1 to 4% of cases). It occurs mainly in children and young adults, with a

clear male predominance. The evolution towards the calcification is exceptional and represents only less than 1% of all the cerebral hydatid cysts [4]. Only a few cases have been described in the literature. The pathophysiology of this calcification is not yet well understood, calcium deposits can form on the adventitia (intracystic fluid reabsorption and thickening of the adventitia), membrane usually absent in the healthy CHC, but very thickened in the calcified CHC. Clinically, the symptomatology of calcified CHC may include focal neurological signs, epileptic seizures and extrapyramidal signs have been reported. Surgical treatment of these calcified hydatid cysts can be difficult because of the adhesions that make it difficult to enucleate them by the method of Arana Iniguez [5] which consists in having the cyst deliver by injecting hypertonic serum between it and the cerebral parenchyma.

## Conclusion

The main purpose of this observation was to report a case treated in our department and to insist on the diagnosis that must be evoked when a calcified lesion is seen especially in countries endemic to hydatid disease.

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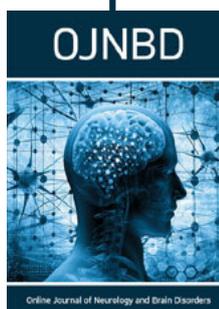


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