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Research Article

FOCAL MIGRANT SEIZURES INDICATIVE OF AGENESIS OF THE CORPUS CALLOSUM ASSOCIATED WITH HEART DISEASE IN ONE CASE

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Abstract

Agenesis of the corpus callosum is a malformation of the encephalic midline characterized by the absence of the interhemispherical commussure. Clinically it is manifested by convulsive seizures, a regression of psycmotor acquisition most often in a polymalformative context.

Keywords: Focal migrant seizures, Agenesis of the corpus callosum and Heart disease.

INTRODUCTION

After the end of primary neurulation, the head part of the neural tube gives rise to three primary vesicles: the hindbrain (hindbrain), midbrain (midbrain) and structures of the forebrain (prosencephalon). The ventral induction process, leading to the development of the forebrain, consists of three closely related event sequences: formation, age cleavage and midline development (Volpe, 2000). Developmental disorders of the prosencephalic midline are mainly represented by agenesis of the corpus callosum. The telencephalon (or interhemispheric) commissures are corticocortical band of white matter extending from one hemisphere to the other, typically but not absolutely in a symmetrical fashion (Barkovich, 2000; Raybaud and Girard, 2005). Objective of our presentation is to determine a relationship between focal migrant seizures, corpus callosum agenesis and heart disease.

Clinical case

One year old male infant with no pathological history who progressively presents with focal convulsive seizures associated with regression of acquisitions. The beginning of the symptomatology reassembled about 4 weeks ago by the occurrence of migrating focal motor seizures sometimes on the left sometimes on the right with a post-critical loss of consciousness without a schedule, at a frequency of two to seizures per week. Convulsive seizures as well as the occurrence of the head not being held justifies the consultation at the Fann hospital in Dakar, pediatric neurology service for treatment. The general clicks review: Good general condition, slightly colored mucous membrane, good state of hydration, good state of nutrition and no edema of the limbs objectified.

- Neurological examination
- Conscious, do not watch the stimulation.
- Axial hypotonia, spastic hypertonia in 4 limbs associated with amyotrophy.
- Vivid and poly-kinetic osteotendinous reflex to 'limbs, cutaneo-plantar reflexes indifference bilaterally. Conservative reflex noseux, good idiomuscular response to percussion. No objectified oculomotricity damage. Coordination of movements not assessed.
- Other devices
- Cardiovascular audible arrhythmic heart sounds with the presence of a systolic murmur to the entire focus.
- Pleuropulmonary calm breathing, eupneic
- Soft abdomen without palpated organomegalies

A total child of one male sex, with no known pathological history who progressively presented Focal migrant crises, in which the examination revealed:

- A pyramidal syndrome of the four members of cortical type
- Signs of cortical irritation
- A psychomotor regression
- Cardiac arrhythmia with systolic murmurs

As a diagnostic hypothesis:

- Encephalopathy on heart disease. Which can be metabolic, infectious and malformative
- Faced with this clinical picture, only brain imaging can help to support the diagnosis.

Cardiac ultrasound figure: shows interatrial communication with 13 mm wide ostium secondum and persistence of 1.54 mm arterial channel with left right shunt. The diagnoses retained were a malformative encephalopathy on congenital heart disease.

As an anti-comitial neurological treatment: sodium valproate at a dose of 20 mg / kg per day with lull of convulsive seizures and motor physiotherapy. For heart disease, we were asked to monitor the child

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Brain scan

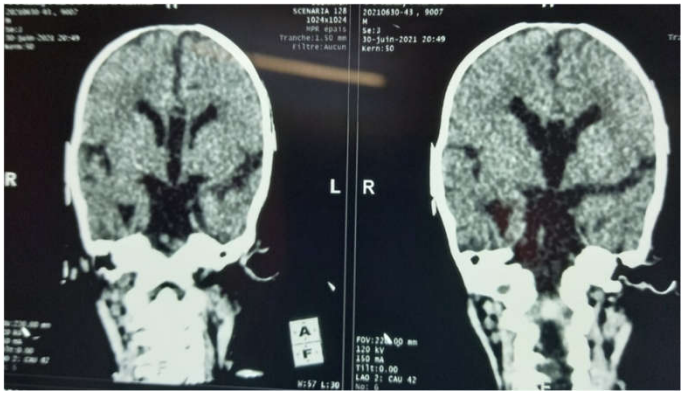
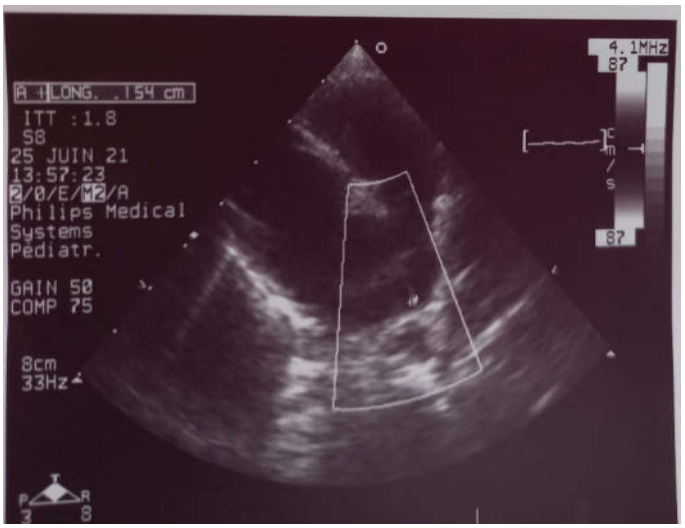


Figure: CT scan of the parenchymal window, objective coronal slices:

- Agenesis of the corpus callosum with bull horn aspect of the frontal horns
- Appearance of the dilated third ventricle with no density abnormality.

Echocardiography



DISCUSSION

Rarely isolated agenesis of the corpus callosum is usually accompanied by other brain damage which may manifest as axial hypotonia and signs of cortical irritation (seizures). It is associated with other malformations in 80% of patients. Cases (P. Volpe et al) of the midline (agenesis of the olfactory bulbs, cerebellar vermis, etc.) and potentially associated with anomalies of the extra-cerebral midlines in 60% of cases (Raybaud et al). It is advisable to systematically search in a police way for other malformations in the face of agenesis of the corpus callosum, in particular cardiac, skeletal and genital-urinary anomalies because negligence risks jeopardizing the vital and functional prognosis of the patient. The neuropsychological fate of these often disturbed children, which requires long follow-ups by specialists in this fields often not easy to find for lack of qualified people hence the need for pre-natal diagnosis which is not easy on our counterparts because of a lack of adequate technical platform.

Conclusion

Complex pathology often poly malformative, after the course of our cases we realized that there is a relationship between callosum malformation, heart disease and focal migrating crises.

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