Reviewer's report

Title: Rare association between cystic fibrosis, Chiari I malformation, and hydrocephalus in an infant: case report and literature review

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Reviewer: Jose Francisco Salomao

Which of the following best describes what type of case report this is?: Unexpected or unusual presentations of a disease

Has the case been reported coherently?: Yes

Is the case report authentic?: Yes

Is the case report ethical?: Yes

Is there any missing information that you think must be added before publication?: Yes

Is this case worth reporting?: Yes

Is the case report persuasive?: Yes

Does the case report have explanatory value?: Yes

Does the case report have diagnostic value?: Yes

Will the case report make a difference to clinical practice?: Yes

Is the anonymity of the patient protected?: Yes

Comments to authors:

General comments:

The authors report a rare association between hydrocephalus, cystic fibrosis and Chiari type 1 malformation (CM). Due the small number of related publications, the paper should be accepted. However a few points deserve considerations:

1. In the abstract, 6th line: “Our report describes the ninth case of a 10-mont-old infant present with a new diagnosis of CF…” According to the report itself, it is not the ninth case of a 10-mont-old infant, but the ninth case of this association in infant and children, ranging from 4 months to 18 years. Written in this manner, it may lead readers to erroneous conclusions.

2. When the authors discuss the relationship between CM and persistent
wheezing and coughing, it would be interesting to speculate about some of the theories linking CM to dynamic changes in and around the foramen magnum, as suggested by many authors.

Revisions necessary to publication:

1. The word Methods in Abstract is misused since no method was applied. It would be better to use “Report of the case”.
2. It would be better to use triventricular hydrocephalus instead of tri-ventriculomegaly.
3. The word diagnoses is used several times instead of diagnosis. I did not find diagnoses in the Stedman’s Medical Dictionary.
4. Page 7: First paragraph: when the authors mention the influence of vitamin A deficiency in the development of the vault in hamster embryos (lines 10-12), the source is not quoted in the text. Please inform the reference number. The same in the last paragraph, 6th line: “But overt hydrocephalus is only reported in 7-10% of patients with symptomatic Chiari I malformation” ; the same in next setence: “On the other hand…… the posterior fossa with subsequent arachnoid adhesions.
5. Although the reference 12 is acceptable, it would be better to quote Chiari’s original work in german (Über Veranderungen des Kleinhirns infolge von Hydrocephalie des Grosshirns. Dtsch Med Wscr 17:1172-1175) and then refer to the source consulted, in the case: “ Chiari H (1891) Über Veranderungen des Kleinhirns infolge von Hydrocephalie des Grosshirns. Dtsch Med Wscr 17:1172-1175 cited by ( or translated by …… Pediatr Neurosci 1987, 13:3-8

Quality of written English: Needs some language corrections before being published

Declaration of competing interests:

I declare that I have no competing interests.