

Peer Review file

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Reviewer Comments

We are very grateful for reviewer's supportive and constructive comments that help us improve our manuscript in many aspects. We've carefully reviewed and addressed the issues raised by the comments, which are listed below:

1. (Title) Please change to: A neonate with molybdenum cofactor deficiency type B.
Reply: Thank you so much for comments. We have modified our text as advised. We have changed the text title to: A neonate with molybdenum cofactor deficiency type B.
2. (Abstract) In the background line 15: it has never been reported in China. Is it better to say: certain types have never been reported in China.
Reply: Thank you so much for comments. We have modified our text as advised.
Change in the text: Page 1, Line 13.
3. (Article) Line 41: Change the sentence to: All patients with MOCS2 who develop symptoms in the newborn period have typical clinical feature.
4. Reply: Thank you so much for your advice. We have modified our text as advised.
Change in the text: Page 3, Line 39.
5. (Article) Line 44: what does CARE stands for?
Reply: Thank you so much for comments. CARE stands for Case-Report.
6. (Article) Line 47: Change the sentence to: The patient we report here is a 3.96 kg full term Chinese female neonate with normal birth by cesarean section, who was the first baby of a couple with no consanguinity.
Do you have Apgar scores? Umbilical cord blood gas? Pregnancy history? Placenta pathology? Useful to add here to show that Hypoxia ischemia is ruled out.
Reply: Thank you very much for your professional suggestions. We added some necessary information of the baby as advised to rule out Hypoxia ischemia. The infant was born after 39+3 week's gestation to a 27-year-old primigravida mother. The amniotic fluid was clear and there was no abnormalities with umbilical cord or placenta. The Apgar scores were 9 at 1min and 10 at 5min. But there was no umbilical cord blood gas.
Change in the text: Page 3, Line 44-47.
7. (Article) Line 49: change the sentence to the following: The girl was well until the

third day after birth, when she showed feeding difficulties, strenuous breathing, and refractory convulsions.

Reply: Thank you so much for comments. We have modified our text as advised.

Change in the text: Page 3,Line 49.

8. (Article) Line 51: change the sentence to the following: The local hospital started intravenous nutrition, intubation and mechanical ventilation, antibiotics, and anticonvulsant therapy.

Reply: Thank you so much for comment. We have modified our text as advised.

Change in the text: Page 3,Line 51.

9. (Article):Line 53: The cerebrospinal fluid was normal; do you mean culture was negative

ruling out bacterial infection? Any viral PCR done?

Reply: Thank you so much for comments. The local hospital did routine and culture tests of

cerebrospinal fluid. The CSF analysis showed negative. But we didn't do viral PCR. The infant did not get a fever and the blood routine was normal(white blood cell count , $17.97 \times 10^9/L$ on the third day after birth).And the mother of the patient was not infected either. So we ruled out intracranial infection.

- 10 (Article) Line 53: change the sentence to the following: On the third day of life, she had a brain MRI which showed DWI signal shadow in the cotex-medulla junction of the bilateral hemispheres.

Reply: Thank you so much for your advice. Because we reformatted the image of the patient according to the following comments(Question 23),so we modified as: One the third day of life, she had a brain MRI which showed low-density signal around the lateral ventricle.

Change in the text: Page 3,Line 53-54.

- 11 (Article) Line 56: change the sentence to the following: She had dystonia and loss of reflexes when she was hospitalized while no dysmorphic features were noted.

Reply: Thank you so much for comments.We have modified our text as advised.

Change in the text:Page3,Line 55-56.

- 12 (Article) Line 63: TORCH capital letters.

Reply: Thank you so much for comment. We have modified our text as advised.

Change in the text: Page 4,Line 62.

- 13 Article) Line 66: Multicystic instead of polycystic.

Reply: Thank you so much for comment. We have modified our text as advised.

Change in the text: Page 4,Line 65.

14 (Article) Line 66: what is the name of the genetic testing done? Can explain a little bit more? Was the mutation present in the MOCS2 gene suggesting Molybdenum cofactor deficiency?

Reply: Thank you so much for your professional suggestions. We performed a genetic whole exon test on this infant and her parents. This mutation present in the MOCS2 gene was a pathogenic mutation site and was related to Molybdenum cofactor deficiency according to [Standards and guidelines for the interpretation of sequence variants\(Richards et al.,2015\)](#) .We added the information in the text: Page 4,Line67-69.

15 (Discussion) Line 75: change the sentence to the following: and MOCS3 genes.

Reply: Thank you sincerely for comment. We have modified our text as advised.
Change in the text: Page 4,Line 75.

16 (Discussion) Line 78: change the sentence to the following: but it is not used in patients with MOCS2 mutation.

Any difference in presentation between MOCS1 and MOCS2 in the neonatal period?

Reply: Thank you very much for comments. We have modified our text as advised.

Change in the text: Page 5,Line 78.

There are not much difference in presentation between MOCS1 and MOCS2 in the neonatal period. From reference that reported, the patients with MOCS1 also have intractable epilepsy, hypotonia, feeding difficulties, and not all of them have facial dysmorphism. Biochemical hallmarks are decreased plasma uric acid and positive sulfite reaction on urin.

17 (Discussion) Line 81: change the sentence to the following: The patients with MOCS2 mutation are divided into two forms: early onset (during the neonatal period, which is the most common), and late onset.

Reply: Thank you very much for comments. We have modified our text as advised.

Change in the text: Page 5,Line 80-81.

18 (Discussion)Line 85: Delete this sentence (She is onset the third day after birth, has intractable convulsion, feeding difficulty, and low muscle tone). Change to the following: The patient in our case is also a typical early onset with no dysmorphic features. She is the first Chinese patient reported with symptoms onset in the newborn period.

Reply: Thank you very much for your advice. We have modified our text as advised.

Change in the text: Page 5,Line 84-85.

19 (Discussion)Line 84: do you mean hypotonia?

Reply: Thank you very much for comment. The“low muscle tone” here means “hypotonia”.

20 (Discussion)Line 87: change the sentence to the following: and she is the first Chinese patient who has symptoms in the newborn period.

Any idea why she is the first reported patient in China? Any specific ethnic background of the parents? Or is it just rare to begin with?

Reply: Thank you sincerely for comments. We have modified our text as advised.

Change in the text: Page 5,Line 85.

We searched the Chinese literature database and found no relevant reports. We also searched Pubmed related literature, and did not find reports of early-onset MOCS2 from China. There is no specific ethnic background of the parents. Clinically, it is very rare.

21 (Discussion)Line 93: Change the sentence to the following: From the references of neonate with MOCS2 that have been published, laboratory abnormalities were found in early onset MOCS2 including very low....

Reply: Thank you very much for your advice. We have modified our text as advised.

Change in the text:Page 5,Line 89-90.

22 (Discussion)Line 96: Change the sentence to the following: Neonatologists can consider doing further urine analyses if similar clinical manifestations are encountered.

Thank you very much for comments. We have modified our text as advised.

Change in the text:Page5,Line 92-94.

23 Line 175 and 176 Figure-1: Can you add a figure legend describing each image? Which one is DWI vs. T1 vs. T2. etc.. Which image is from the original hospital and which one is from Chinghai?

Reply: Thank you sincerely for your professional suggestions. We had added the figure legend describing each image. And we reformatted the images as suggested above.

24 There is a table at the end of the document with no reference in the manuscript.

Reply: Thank you sincerely for comments. The reference of the table is in the main document.