

Dear Editor

We have carefully read the comments and addressed the questions as follows.

Reviewer: 1

1. In the Abstract, please include demographic data and increase the description of the clinical data of the patient described.

**Response: Thank you for this good advice. In case summary of the abstract, we supplemented the patient's clinical information.**

2. In the Abstract (Conclusion) and in the Discussion, please add “syndrome” to “acute onset of conus medullaris”.

**Response: Thank you for this good advice. We added the word in the abstract.**

3. Please change “positive Babinski sign” to “presence of Babinski’s sign” in the text.

**Response: Thank you for this good advice. The patient lack the Babinski’s sign and we changed it in the text.**

4. In the Discussion section, it would be interesting to include a comment on the fact that spontaneous dorsal spinal cord infarction is a rare event and represents, for example, <0.4% of ischemic strokes in a large stroke data bank (Cerebrovasc Dis 2008; 26: 509-516)

**Response: Thank you for this good advice. We revised the first paragraph in the discussion according to the comment of the reviewer.**

Reviewer: 2

1. Novelty: The contributions that the study has made for research progress in this field should be highlighted.

**Response: Thank you for this good advice. Spontaneous conus medullaris infarction is rare. This study reported a case of spontaneous conus medullaris infarction in detail, reviewed the literature of 23 similar cases previously reported, and summarized the clinical features and**

**magnetic resonance manifestations of common "snake-eye sign" related diseases, providing theoretical basis for the diagnosis and prognosis of spontaneous conus medullaris infarction.**

2. Discussion: 2.1 Since the "snake-eye appearance" is not specific to spinal cord MRI, please discuss the differential diagnosis between spontaneous conus infarction and hirayama disease, spinal muscular atrophy syndrome, cervical spondylotic myelopathy and upper limb monomelic muscular atrophy on MRI and other clinical features. And summarize them on a table.

**Response: Thank you for this good advice. We added Table 2 and uploaded it to the supplementary material.**

2.2 Please discussed the CTA features of spontaneous conus infarction.

**Response: Thank you for this good advice. In discussion, we discussed the CTA features.**

2.3 Please also discussed the results of cerebrospinal fluid examination of spontaneous conus infarction.

**Response: Thank you for this good advice. In discussion, we discussed the results of CSF.**

2.4 Limitation and future scope are missing.

**Response: Thank you for this good advice. At the end of the discussion, we added the limitation.**

3. Figure: 3.1 Please provide the figures of CTA examinations.

**Response: Thank you for this good advice. Because the CTA file is large, we uploaded the CTA file in the supplementary material.**

3.2 Please provide the figures of MRI examinations during follow up if possible.

**Response: Thank you for this good advice. The patient did not undergo MRI during follow-up.**

3.3 The arrows should be more striking.

**Response: Thank you for this good advice. We changed the arrow in the figure.**

4. References: It is better to cite the literature published in recent years, some references are too old.

**Response: Thank you for this good advice. We have reviewed the relevant literature on snake-eye sign of spinal cord infarction in detail, but in recent years, there are few relevant reports. In the revised version, we have updated the references as much as possible.**