

LETTER TO THE EDITOR

Author reply to “How to distinguish crowned dens syndrome from acute meningitis?”

To the Editor,

We thank the reader for his knowledgeable comments on our study.^{1,2} We were asked to disclose how the indication for lumbar puncture was determined during this study. Unfortunately, there was no uniform indication for lumbar puncture in this study, neither was data collected on the reason the physician performed the lumbar puncture in each case. This study was a retrospective study, and the decision to perform a lumbar puncture was at the discretion of the examining physician in each hospital. As you mentioned, determining which patients presenting with acute neck pain should undergo lumbar puncture is subjective.

From the present study, cervical rotation restriction (inability to rotate the neck or pain with even slow neck rotation) may be a characteristic finding of CDS. This is a different physical finding from the Jolt accentuation headache (accentuation of headache by horizontal rotation of the head at a frequency of two to three times per second) observed in meningitis. If cervical rotation restriction with neck pain is less frequent in meningitis, a finding of restricted cervical rotation with neck pain may be diagnostic of CDS and rule out meningitis. We hope that clinical criteria for diagnosing CDS, including cervical rotation restriction, that are distinct from those of meningitis will be developed.

AUTHOR CONTRIBUTIONS

All authors meet the ICMJE authorship criteria. HI wrote the manuscript, and all of author reviewed and edited the manuscript.

CONFLICT OF INTEREST STATEMENT

The authors have stated explicitly that there are no conflicts of interest in connection with this article.

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REFERENCES

1. Uchihara T, Adachi S, Toru S. How to distinguish crowned dens syndrome from acute meningitis? (to be published).
2. Isono H, Kuno H, Hozumi T, Emoto K, Nishiguchi S, Sakai M, et al. Crowned dens syndrome: a case series of 72 patients at eight teaching hospitals in Japan. *J Gen Fam Med.* 2023;24(3):171–7.