Crowned Dens Syndrome Mimicking Meningitis

Kei-ichi Ishikawa, Tsuyoshi Furuya, Kazuyuki Noda and Yasuyuki Okuma

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Picture 1.

A 78-year-old woman presenting with fever and occipital headache was referred to our service with suspicion of meningitis. Neurological examination was normal except for cervical stiffness. CRP level was increased to 18.7 mg/dl. Cerebrospinal fluid examination was normal. Cervical CT image at C1/C2 level showed right dominant semicircular calcifications posterolateral to the odontoid process (dens) (Picture 1A). Coronal view showed crown-like calcifications around the dens (Picture 1B), and sagittal image revealed linear calcification behind the dens (Picture 1C). The diagnosis of crowned dens syndrome (CDS) was made. Her symptoms were completely resolved after NSAID administration.

CDS is characterized by acute neck pain and calcium pyrophosphate dehydrate deposits (pseudogout) around the odontoid process in the elderly (1, 2). When encountering a

patient with cervical stiffness and inflammatory reactions, it is reasonable to perform lumbar puncture first to rule out meningitis. If the results are negative, CDS should be considered. Anti-septic treatments are not necessary and adequate anti-inflammatory medications including corticosteroids will lead to a successful outcome.

References

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