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Pediatric spinal ependymoma: a case report

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Introduction

Spine and spinal cord tumors are rare central nervous system neoplasm and account for about 2% of the total pediatric tumor. It is difficult to make early diagnosis of these tumors, for they only show nonspecific or ambiguous symptoms and signs such as a back pain, hand clumsiness, scoliosis, or kyphosis. This case is about a 5-year-old boy with neck pain and limited neck motion, diagnosed as spinal ependymoma.

Case report

A five-year-old male presented with neck pain and restricted neck movement. He did not have any specific birth related events nor any history of spinal deformity including torticollis. He complained persistent chest pain after playing a mini-pocket ball game one month prior to the visit, followed by gradually progressive posterior neck pain and bilateral shoulder pain. Initially, pain did not exist during the daytime, and chest pain was reported only at night. Later, activity was limited due to pain during the day. He continued manual therapy at the local clinic, however, visited our department as the symptom did not get improved. On examination, he was constantly bending his neck forward and refused to move neck in any direction complaining of severe pain on motion. Slight head tilting leftward was noticed, although asymmetrical rotational deformity was not prominent. Diffuse tenderness of the bilateral neck muscle was shown. Sensory changes or weakness in the limbs were not prominent, although the assessment was unreliable. Upper motor neuron signs including ankle clonus or Babinski signs were not present. Plain X-rays of the spine showed marked cervical kyphosis and right thoracic scoliosis without any signs of dislocation or subluxation (Fig 1). On cervical spine MRI (Fig 2), mass-like lesion with T2 high, T1 iso-to-low signal intensity was detected, involving entire gray matter and outer white matter at T4-T11 level. Above the lesion, about 2.4 cm-length cystic lesion with peripheral enhancement from T2 to T4 level was shown, which was probably assumed as a capping with internal hemorrhage and hemosiderin deposit. At C2 to T2 level of spinal cord, secondary syrinx formation was also shown. These findings were consistent with the spinal ependymoma.

Conclusion

The unusual neck positioning, such as acquired torticollis or kyphosis is mostly benign in pediatric populations, however, there are exceptions. More ominous causes include respiratory tract infections, atlanto-axial subluxation and more seriously, spinal tumors. Since neurological symptoms are unreliable and difficult to suspect pathology in children, spinal MRI should be considered in children with unusual neck pain to make timely diagnosis and treatment.

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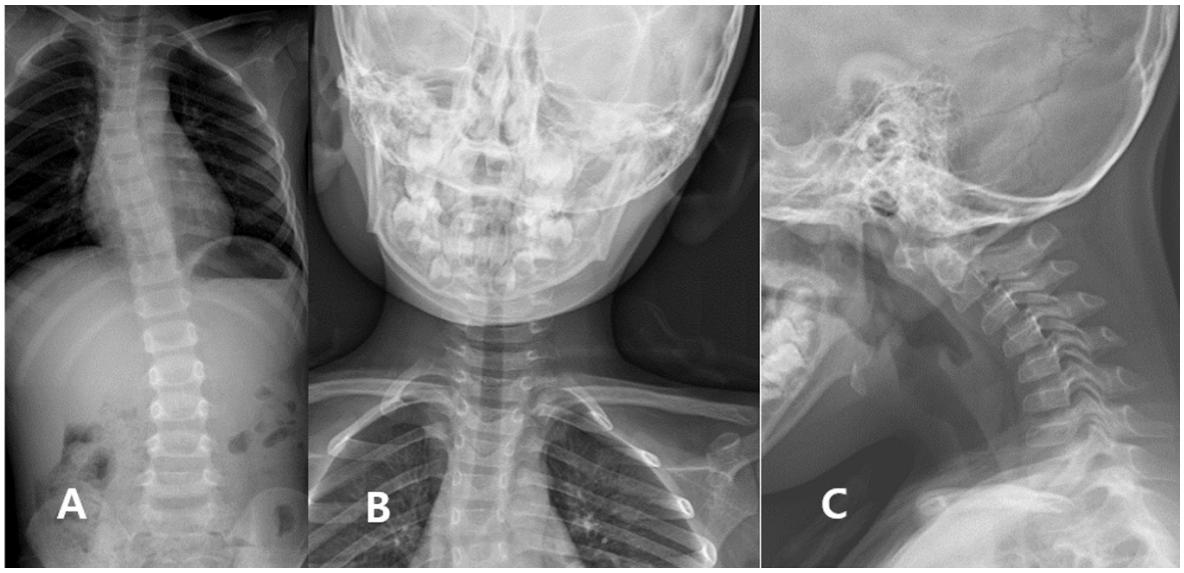

Figure 1. Plan X-rays. (A) Whole-spine AP showing dextroscoliosis in the thoracic spine level and (B) cervical spine AP and (C) lateral showing cervical tilting toward left side and kyphosis. Abbreviations: AP, anterior-posterior

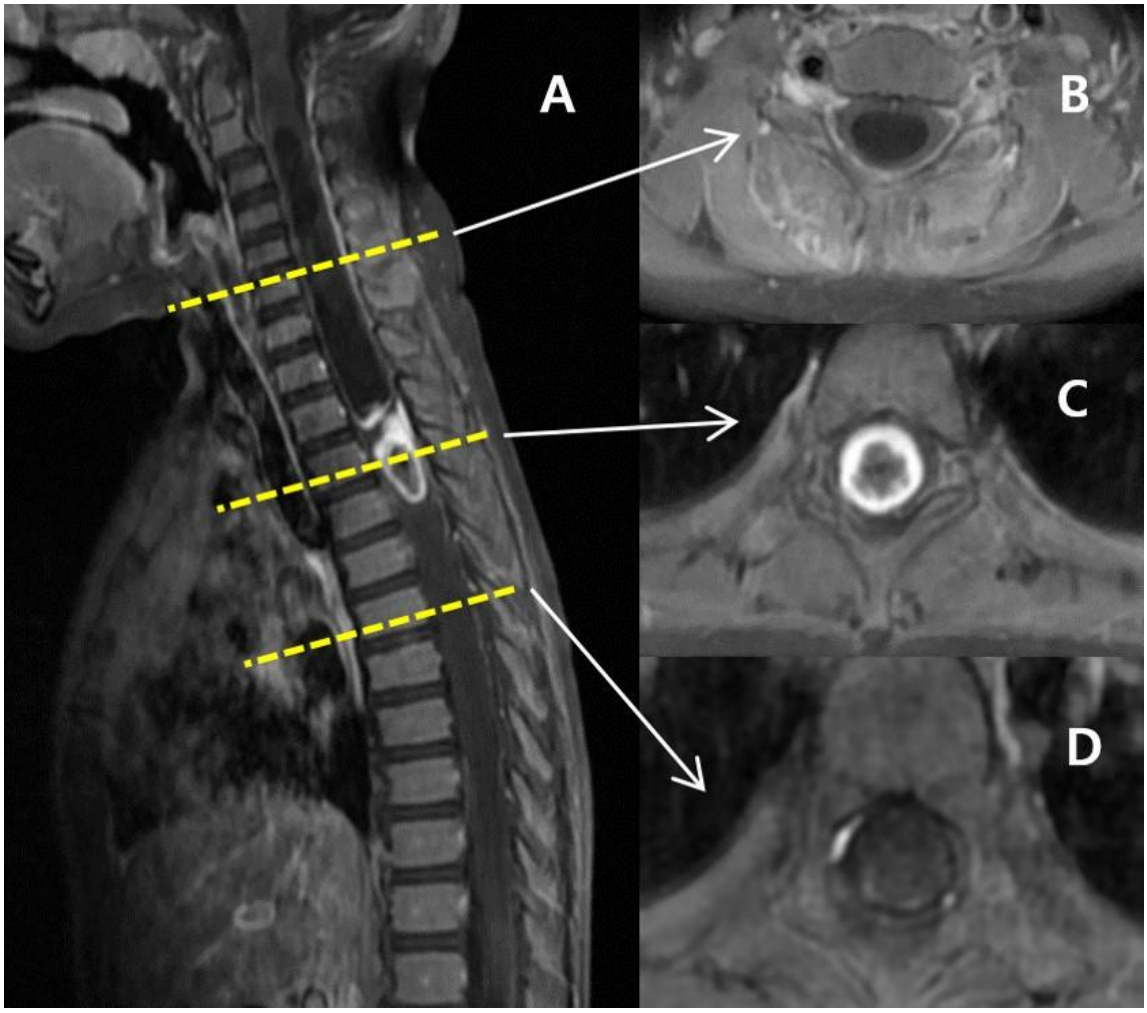

Figure 2. Cervical spine MRI. T1-weighted, gadolinium-enhanced fat suppression sequence of cervical spine MRI. (A) Sagittal cut (left) shows T4-T11 ependymoma with C2-T2 secondary syrinx and T2-T4 cystic lesion. Axial cuts each showing (B) syrinx, (C) cystic lesion with hemorrhage and (D) T4-T11 ependymoma lesion.