

 IMAGES OF SPINE CARE

A rare case of noncontiguous multiple spinal Langerhans cell histiocytosis involving atlantoaxial instability

A 14-year-old girl was referred to our department who presented with occipitocervical pain for 1 month, without numbness or weakness of four limbs. Physical examination of the patient showed tenderness of occipitocervical region, no hypesthesia region or weak myodynamia of four limbs was detected. The results of laboratory examinations

showed that erythrocyte sedimentation rate (ESR) was 56 mm/h, C-reactive protein (CRP) was 38.5 mg/L, carbohydrate antigen (CA)72-4 12.7 U/mL, bone alkaline phosphatase (B-ALP) 58.4 ug/L. Whole spine sagittal magnetic resonance imaging (T2) showed C2, T1, T5, T12, and L4 vertebral body destruction without compression of spinal cord (Fig. 1). Cervical magnetic resonance imaging (T2) revealed deconstruction of C2 right side vertebral body by tumor. Tumor broke bony wall of vertebral body and extruded with paravertebral extension. T1 and T5 vertebral bodies were deconstructed with signal changing (Fig. 2). Three-dimensional computed tomography reconstruction of C1–C2 showed deconstruction for right side of C2 vertebral body and the basal part of odontoid, and the

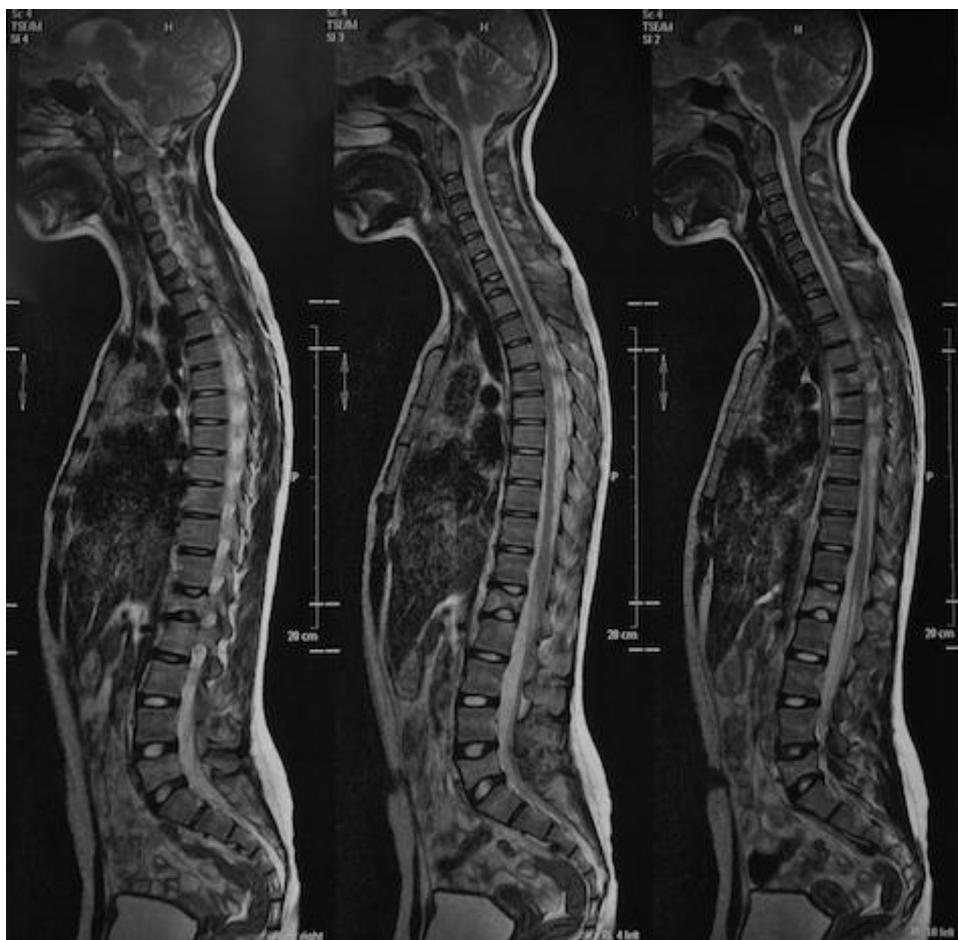


Fig. 1. Whole spine sagittal magnetic resonance imaging (T2) showed C2, T1, T5, T12, and L4 vertebral body destruction without compression of spinal cord.

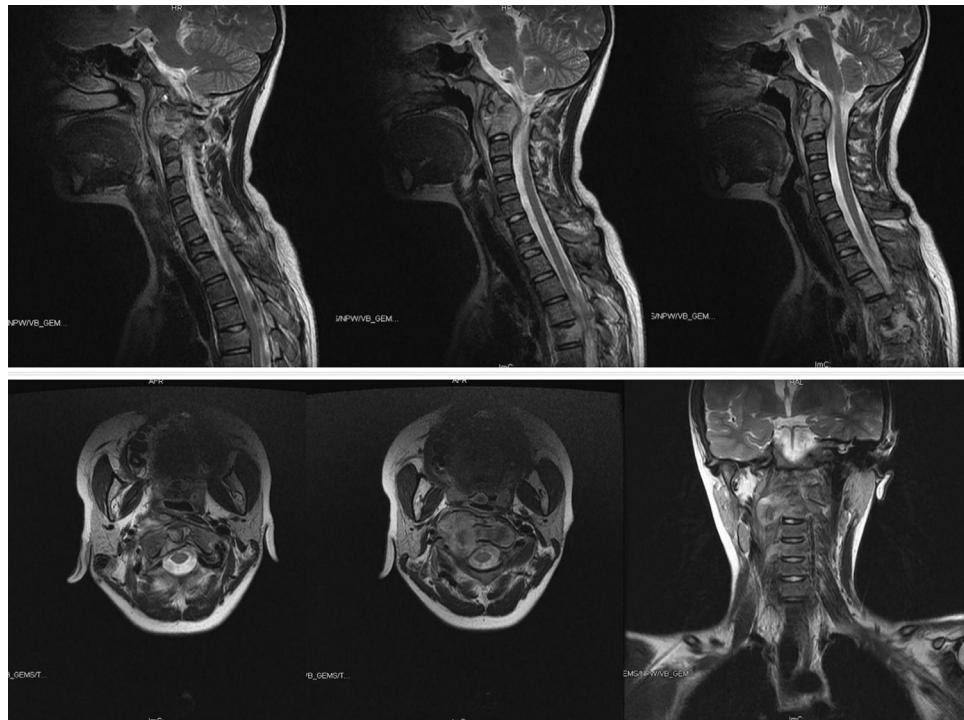


Fig. 2. Cervical magnetic resonance imaging (T2) revealed deconstruction of C2 right side vertebral body by tumor. Tumor broke bony wall of vertebral body and extruded with paravertebral extension. T1 and T5 vertebral bodies were deconstructed with signal changing.

distance between odontoid and bilateral C1 lateral mass was asymmetric. This led to atlantoaxial instability (Fig. 3). After admission, the patient was given occipital-jaw traction of 2 kg and limited activity. The patient underwent anterior tumor curettage and iliac bone graft without fixation because of the instability of atlantoaxial. The postoperative pathologic diagnosis was Langerhans cell

histiocytosis. The other involved segments were considered stable, and no surgical intervention was given. After surgery, occipitocervical pain was partly relieved. The patient maintained occipital-jaw traction for 1 month postoperatively and then wore skull-neck-thorax brace for another 2 months. Occipitocervical pain relieved completely at a 3-month follow-up.

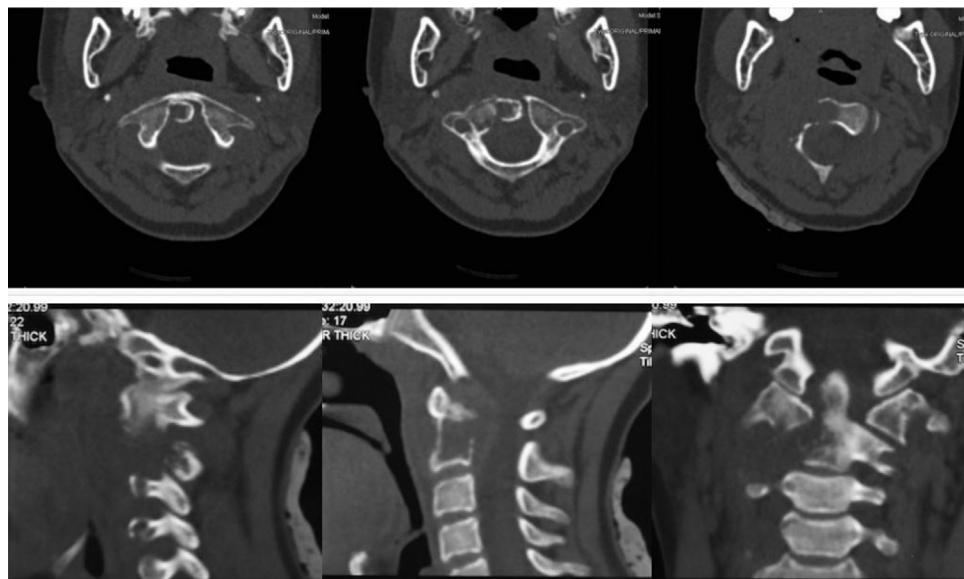


Fig. 3. Three-dimensional computed tomography reconstruction of C1–C2 showed deconstruction for right side of C2 vertebral body and the basal part of odontoid, and the distance between odontoid and bilateral C1 lateral mass was asymmetric. This led to atlantoaxial instability.

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