



The Spine Journal 15 (2015) 1904–1906

**THE
SPINE
JOURNAL**

IMAGES OF SPINE CARE

Sagittal alignment maintained using anterior discectomy and fusion in a child with postlaminectomy kyphosis after intraspinal tumor excision—a follow-up imaging series

An 11-year-old boy was diagnosed as having C3–C4 intradural tumor presenting with progressive neck pain with radiation to the left shoulder for half a year. He underwent C2 left hemilaminectomy and C3–C4 laminectomies with microsurgical excision of the tumor. Surgical pathology revealed neurilemmoma. Stereotactic radiosurgery was performed for the residual tumor at the left C4 root because of vertebral artery encasement. Kyphotic deformity developed gradually 3 months after surgery, and left arm weakness and numbness developed 9 months later. Follow-up cervical spine plain X-ray image (Fig. 1) showed severe kyphosis deformity, and magnetic resonance image showed severe cord compression. Three-level discectomies with Fidji polyetheretherketone cage (Zimmer, Syracuse, NY, USA)

replacement and plate-screw fixation for arthrodesis were performed (Fig. 2). A cervical collar was applied for 3 months. Series sagittal X-rays showed maintenance of alignment during 7 years of follow-up (Fig. 3).

Spinal deformity after posterior decompression is a common complication, most notably in children and young adults, after the removal of intramedullary tumors. A 34.6% incidence of postoperative spinal deformity was reported in younger patients [1]. Radiation represents an aggravating factor for preexisting spinal deformities, especially for the growing spine [1,2]. There is no standard management for postlaminectomy deformity in children. The utility of routine posterior instrumented arthrodesis remains uncertain but may be considered for individuals with multiple risk factors for postoperative deformity [1].

References

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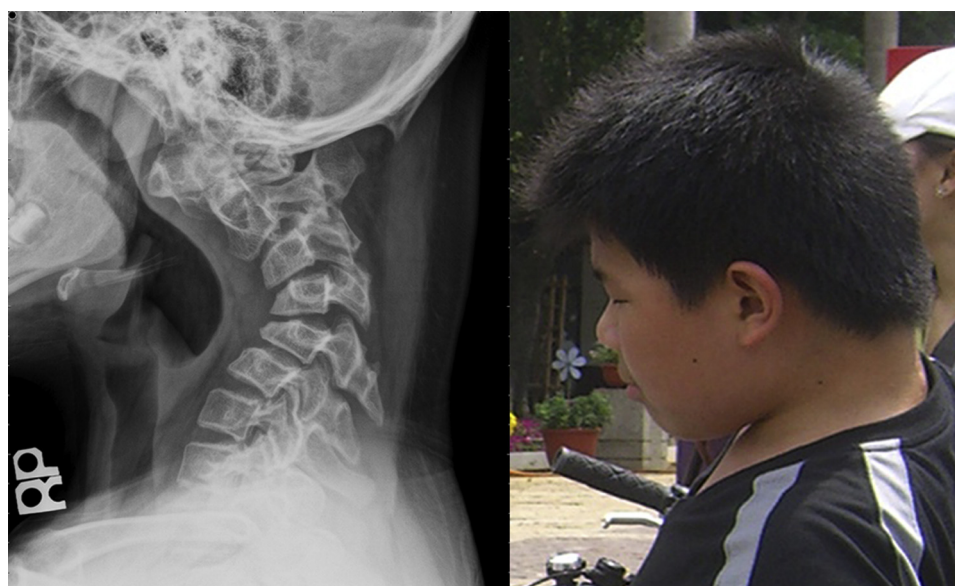


Fig. 1. Both physical appearance and X-rays are shown. Post-laminectomy kyphosis appeared on X-ray after removal of the C3–C4 intradural neurilemmoma. Body height was 152 cm.

<http://dx.doi.org/10.1016/j.spinee.2015.04.019>

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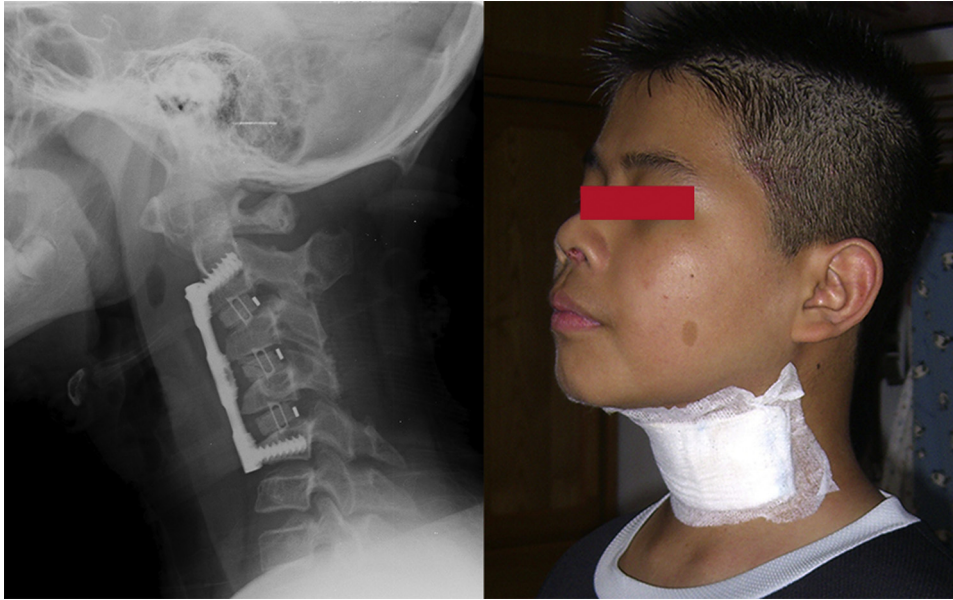


Fig. 2. Both physical appearance and X-rays are shown. Anterior discectomies C2–C3–C4–C5, with PEEK cage interbody fusion and plate-screw fixation were performed. Cervical spine sagittal alignment was restored partially. Body height was 162 cm.

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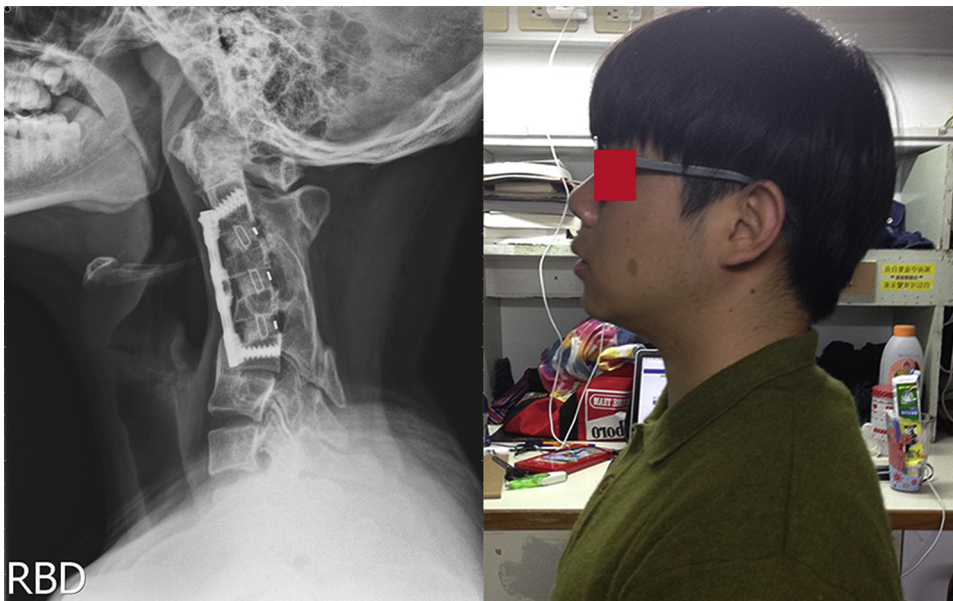


Fig. 3. Both physical appearance and X-rays are shown. Cervical spine sagittal alignment was maintained 7 years after operation. Body height was 168 cm.

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FDA device/drug status: Not applicable.

Author disclosures: **C-ML**: Nothing to disclose. **T-HK**: Nothing to disclose. **S-YC**: Nothing to disclose. **H-KT**: Nothing to disclose.