Pediatric Cervical Tuberculosis: Well-Timed Remedy, Sterling Outcome

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Introduction: Cervical spinal tuberculosis (CST) accounts for 3-5% of spinal tuberculosis. Pediatric CST however is uncommon, potentially debilitating disease that may permanently affect children growth if left underdiagnosed due to its occult onset.

Case Report: Here is case of a 12 year old boy presented to clinic with neck pain for 2 months associated with weight and appetite loss. He was treated initially as muscle sprain but symptoms were unresolved with analgesics. Blood tests showed significantly raised Erythrocyte Sedimentation Rate and C-Reactive Protein. Cervical radiograph shows decreased vertebral height of C4/C6 and destruction of C5 vertebral body. Neurological examination were unremarkable. Spondylodiscitis was suspected. Workup for tuberculosis was negative and chest radiograph was normal. Due to clinical course being annihilative behaviour, tuberculous spondylodisciitis was provisioned and Akurit-4 standard therapy was commenced via multidisciplinary input. Subsequently due to highly unstable cervical spine with multiloculated rim enhancing collection involving c2/c3 to c6/c7, we proceeded with prevertebral abscess drainage followed by C4-C5 corpectomy with insertion of titanium cage and C3-C6 fusion via anterior cervical approach. Careful preparation of adjacent endplates, intraoperative microbiological stains and cultures were taken and post operatively patient wore a Philadelphia collar. Histopathological examination revealed positive granuloma formation with identification. Cervical radiographs at 4, 8, 12, 20 weeks showed no subsidence and maintenance of cervical alignment with implant in-situ.

Discussion: Pediatric cervical spine has unique anatomy and growth potential. Cervical tuberculosis may affect anterior vertebral body growth with normal posterior elements growth, causing kyphotic spinal deformities. If foci and neurological deficit present, surgical intervention will be required. Few literatures describe how to surgically address this. Some authors advocate anterior aroach for adequate decompression and stabilization of cervical spine. Some recommend posterior instrumentation to impede posterior growth for balance. Current surgical techniques remain controversial.

Conclusion: Application of implant in the presence of infection is possible for cases of cervical tuberculosis with high risk of instability which demonstrate good clinical and radiological outcome.

References:

1. https://www.orthobullets.com/spine/2027/spinal-tuberculosis
2. Wu et al (2019) Journal of Orthopedic Science