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LETTER TO THE EDITOR

Comment on Huang et al.: One-stage surgical management for children with spinal tuberculosis by anterior decompression and posterior instrumentation

Saurabh Jain

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Dear Editor,

I read the article "One-stage surgical management for children with spinal tuberculosis by anterior decompression and posterior instrumentation" by Qi-shan Huang et al. published in the October issue of International Orthopaedics (SICOT) 2009 with great interest [1]. The author presented this clinical study to verify the importance of early reconstruction of spinal stability but also to evaluate results of this method. The author states that he had surgical cases which failed to recover after four to 12 weeks of antitubercular treatment and bed rest for three weeks or for those cases who underwent urgent operations for severe neural deficit. It seems from the table that only two cases were Frankel B and ten were D and E; thus had very little neural deficit. The author further states that 15 consecutive patients were enrolled. This appears contradictory. It seems the author had operated upon all cases that had tuberculosis of spine and not for specific indications.

The author gives a message that cases of tubercular spine in children should be surgically treated by anterior debridement and fusion and posterior instrumentation, which may not be advocated for all cases. Tuberculosis is a medical disease and should be treated by chemotherapy [2]. Surgical decompression in tuberculosis of spine is indicated for cord compression, and stabilisation is indicated for pan-vertebral disease (instability), long segment disease (instability), when patients report with severe kyphosis (for kyphus correction) and for kyphosis which may progress even after healing of lesions in children [3]. We know that the kyphus in children progresses in only 40% of cases even after healing of the tubercular lesion, while in 17% of cases, kyphosis improves and in 43% it remains the same; hence, we need to identify those that will have progressive kyphosis [4]. It is unwise to operate on all when natural history suggests that only 40% will have progressive kyphosis. Such progressive kyphosis can be identified by spine at risk signs [4]. The author has not given any details on the types of cases to establish the indications for surgery. It would thus be improper to give a message that all tubercular spines should be operated upon by the author's approach.

Moreover, in the article the author did not give the number of vertebral bodies affected or the anterior vertebral height loss, which give indirect evidence of progressive kyphosis. The example the author quoted is of single vertebral body disease.

The type of instrumentation which the author has used also suggests that the cases were short segment disease and thus may not be a progressive kyphosis in a dorsal spine lesion. Posterior column growth may not be the reason for progressive kyphosis in children as observed in a long follow-up by Upadhayay et al. in an MRC trial [5, 6].

The terms 'radical resection' and 'radical debridement' are used interchangeably by the author. The term radical resection was used by Hodgson et al. [7] for resection of disease focus like a tumour up to healthy bleeding bone followed by fusion by transthoracic approach in dorsal spine and a transthoracic trans-diaphragmatic approach for dorsolumbar spine in an era when antitubercular treatment was just started [8]. We know that antitubercular treatment reaches adequate concentration in the tubercular pus, granulating tissue, and caeseous tissue; hence the resection of lesion is not to increase the concentration of antitubercular treatment in diseased focus. The debridement of tubercular focus is where pus, granulation tissue and sequestrated bones are removed and infective inflamed

S. Jain (✉)
Department of Orthopaedics, UCMS & GTBH,
Shahdara, Delhi, India
e-mail: jaindrsaurabh@yahoo.com

bone is saved which will reconstitute on antitubercular chemotherapy. Thus we should reserve radical resection to a tumour situation and adequate debridement is adequate for the tuberculous lesion. It is known that with a debridement of lesion some anterior growth potential can still be preserved.

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