Over the next 3-4 months she progressively worsened and became a non-walker with an obvious progression of kyphotic deformity in the upper back. MRI showed an increase in the size of abscess and cord compression. She was again empirically started on secondline treatment with injectable streptomycin and restart of AKT-4 drug. At this stage she was referred to us for further management. Based on worsening inspite of AKT, evidence of 'spine at risk'[1] signs and significant cord compression on MRI [Figures 1-4], decision was made for decompression, instrumentation and deformity correction. On culture and sensitivity testing with the BACTEC-MGIT 960[2] system she was found to be infected with extensively drug resistant (XDR) tuberculosis resistant to all first line drugs. The only drugs susceptible were Ethionamide, PAS and Clofazimine. She was started with PAS, Ethionamide, Clofazimine, Linezolid, Clarithromycin and Amoxicillin Clavulanatein order to include atleast fournew sensitive drugs which were not used in the past.[3-5] Within two weeks of surgery her neurology started improving progressively with the ability to walk with support. After completing 8 months of second line treatment, repeat MRI showed decrease in size of abscess and clinically she could walk without support.

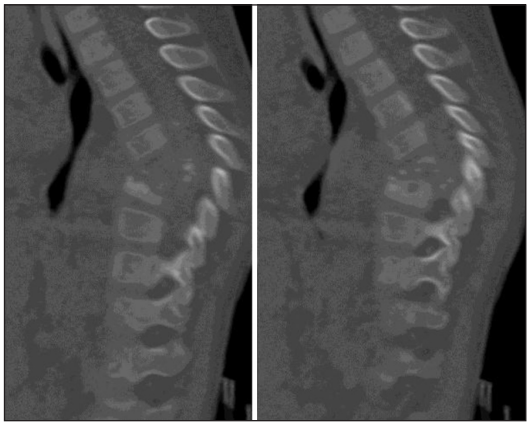

Figure 1: Preoperative CT

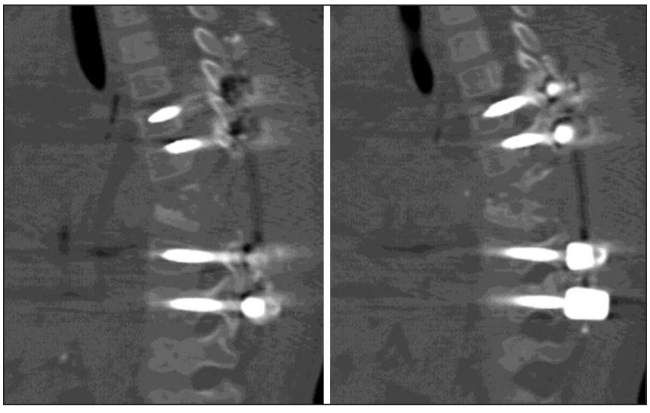

Figure 2: Postoperative CT showing kyphosis correction

De-novo XDR Tuberculosis Spine in a 3-year-old Girl

Sir,

We report the case of a 3-year-old girl who had been diagnosed with tuberculosis of the spine with paraparesis based on clinical and radiological signs. She had received empirical therapy with standard AKT-4 drug and steroids; which were tapered on completion of 2 months of intensive phase with signs of neurological and clinical improvement.

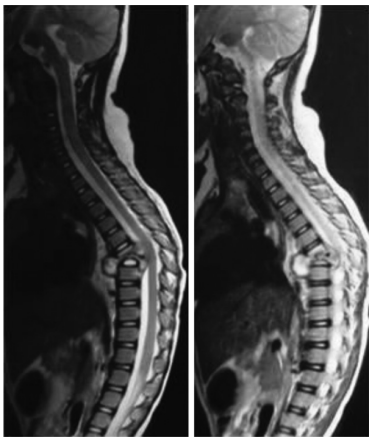

Figure 3: Initial MRI

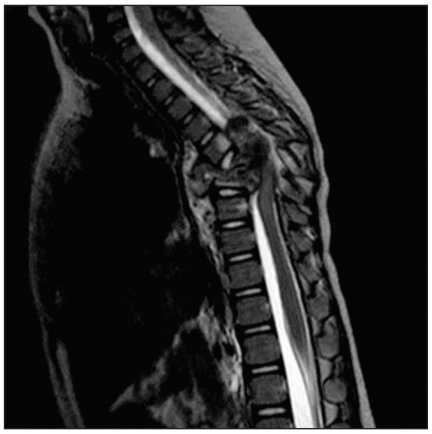

Figure 4: Preoperative MRI (after 6 months empirical treatment)

The possibility of drug resistance, including XDR-TB must be considered in all cases of tuberculosis spine, even in de-novo pediatric cases. At present, in India, screening for drug resistance in spinal tuberculosis is not done routinely. It's mainly done in the patients not showing significant improvement with standard anti-tuberculous treatment. For early diagnosis of the drug resistance and institution of correct therapy, we recommend routine use of microbiologic diagnosis and culture. Our hospital for this purpose uses the BACTEC MGIT 960 system as per critical concentration method of WHO.

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REFERENCES

1. Rajasekharan S. The natural history of post-tubercular kyphosis in children. Radiological signs which predict late increase in deformity. J Bone Joint Surg Br 2001;83:954-62.
2. Lin SY, Desmond E, Bonato D, Gross W, Siddiqi S. Multicenter evaluation of BACTEC MGIT 960 system for second line drug susceptibility testing of Mycobacterium Tuberculosis complex. J Clin Microbiol 2009;47:3630-4
3. Schaaf HS, Marais BJ. Management of multidrug-resistant tuberculosis in children: A survival guide for paediatricians. Paediatr Respir Rev 2011;12:31-8.
4. Migliori GB, Lange C, Centis R, Sotgiu G, Mütterlein R, Hoffmann H, *et al.* Resistance to second-line injectables and treatment outcomes in multidrug-resistant and extensively drug-resistant tuberculosis cases. Eur Respir J 2008;31:1155-9.
5. WHO Stop Tuberculosis Department. Guidelines for the programmatic management of drug-resistant tuberculosis, Emergency Update 2008. Geneva, Switzerland WHO/HTM/TB/2008.402.

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