



Surgical Treatment of Tethered Cord Syndrome

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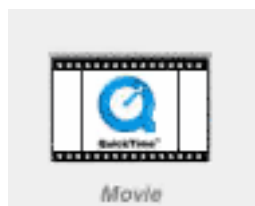


Introduction

Tethered cord syndrome is a common spinal problem seen in Pakistan because of high incidence of spinal dysraphism.

Progressive neurological, urological, and orthopedic dysfunction due to congenital fixation or tethering of the distal spinal cord by the terminal filum is known as TCS.

The treatment for TCS is primarily surgical. Our objective is to compare the surgical outcomes of different pathologies on MRI and presenting complaints.

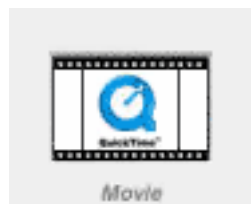


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Methods

Fourty-three consecutive patients taken in age groups of 0-2years, 2-15years, and >15years, undergone surgery for "tethered cord syndrome" over a 3-three year period were reviewed. The main presenting complaints were urine incontinence, back and leg pain, progressive lower limb and spinal deformity and neurological deficits. Untethering of the cord was achieved in majority of the patients, filum terminale was divided in over half of these patients. The mean post-operative follow up was 15 months in which we compared the surgical outcomes with MRI findings, tethering levels and symptoms.



Learning Objectives

By conclusion of this paper, the attendees should be able to choose patients with better surgical outcome than the others in Tethered cord syndrome

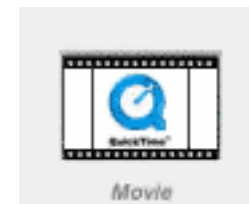
Results Based on MRI findings

Out of 12 patients with Thickened Filum Terminale, 92% presented with paraparesis or paraplegia, out of which 73% have improved post-operatively. All of the 12 patients presented with incontinence, out of which 75% showed improvement post-operatively, 17% remained same and only 1 patient had worsening. Four patients had progressive back or leg pain, which improved in 75% of the patients.

Out of 9 patients with Diastematomyelia, 77% had paraparesis or paraplegia, in which 57% showed improvement and 43% remained static. Out of the 9 patients 8 of them had urine incontinence, out of which 75% improved and 25% remained static. Seven patients had progressive back or leg pain in which 85% improved post-operatively.

Out of 10 patients with Meningocele, all had paraparesis/paraplegia, and urine incontinence, out of which only 30% showed improvement post-operatively and 70% remained static.

76.1% patients with paraparesis showed improvement post-operatively, while 19% remained static and 1 patient had worsening. In 5 patients with paraplegia, only one fifth showed improvement while four fifths remained static.



Conclusions

Patients with paraplegia showed no improvement in neurology. Thickened filum terminale and diastematomyelia had the best outcome and should be considered for surgery. Our series suggests that untethering in patients with "tethered cord syndrome" improves or arrests the progression of neurological deterioration.

The results of our studies coincides with other studies which have shown, more than 85% improvement in tethered cord patients after surgery.