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Experience on 131 cases of pediatric tethered cord syndrome in a single institution (2006-2013)

S.Ç. Önal, Y. Akyuva, T. Ateş, G. Reşitoğlu, Ö. Tarım, A. Takmaz, C.Ö. Çakır, E. Gedik
Departments of Neurosurgery and Anaesthesiology, Inonu University School of Medicine, Malatya, Turkey

Introduction: Tethered cord syndrome (TCS) is a disease with neurocutaneous, neuroorthopaedic, neurourologic, and pure neurologic manifestations Timely surgical therapy is especially important in pediatric population whereas the growth spurt may cause many disabilitating processes including scoliosis, sphincter incontinence, and gait disturbances. Primary tethered cord syndrome (due to occult spinal dysraphism) includes lipomyelomeningocele, split cord malformation, thick-tight / fatty filum terminale, dermal sinüs, and neurenteric cyst. Secondary tethered cord syndrome (due to apert spinal dysraphism) involves the cases with repaired meningocele/myelomeningocele and arachnoid adhesions related to trauma or infection.

Methods: This presentation involves 131 consecutive pediatric tethered cord cases operated within the period January 2006 till December 2013 in Inonu University Turgut Özal Medical Center Department of Neurosurgery.

Results: Relying on our experience it can be concluded that due to effective and timely surgery in tethered cord syndrome, preoperative pain is usually relieved, progression in scoliosis is controlled, fixed motor function loss and neurogenic bladder signs are rarely improved, gait disturbances related to slight motor loss are partially recovered. Due to disperse range and different morphological characteristics of anomalies that cause TCS and difficulty of sustaining objective criteria for neurological deficits of pediatric patients, the comparison and evaluation of results are difficult. In the pediatric age group -whether TCS is symptomatic or not- it is very likely to show clinical signs till adolescence.

Conclusion: It is strongly advised to operate on those patients as early as possible with adequate radiological and laboratory work-up. Lipomyelomeningoceles and intradural lipomas with intact neurological findings may be exceptions for early surgery.