Clinical classification, surgical treatment and curative effect analysis in children with tethered cord syndrome

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Objective: To explore the clinical classification, surgical treatment and curative effect analysis in children with tethered cord syndrome (TCS).

Methods: According to the clinical manifestations and imaging findings, a total of 218 cases of children with TCS were classified into five types, namely tight filum terminale type, myelomeningocele type, lipomatous malformation type, postoperative adhesions type and split cord malformation. All these cases were taken microscopic surgery.

Results: 186 Children were followed up for 3 ~36 months with an average of 15 months. The curative effects were analyzed by Spina Bifida Neurological Scale (SBNS) which is based on sensory and motor function, reflexes, bladder and bowel function. The result indicates that the total effective rate of postoperative children with TCS was 74%. Different types of efficiency were as follows: tight filum terminale type 90%, myelomeningocele type 84%, lipomatous malformation type 65%, postoperative adhesions type 75% and split cord malformation 82%, respectively.

Conclusions: Early diagnosis and microsurgical operation are keys to the treatment of TCS. The operation effect and prognosis are mainly related to TCS types, operation time, and severity of symptoms, neural neurolysis and retethering.

Suitable clinical classification for TCS is helpful in deciding the prognosis and guiding the treatment.

Keywords: tethered cord syndrome; classification; surgery; therapy; prognosis