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Spinal lipoma – To operate or just to observe?

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Spinal lipoma is a controversial clinical condition. There are many classifications of pathological entity, different views in indications of operation and different techniques at surgery. The aim of our study is to describe our management and share experiences.

Method: Authors present retrospective analysis of 25 children with spinal lipoma (SL) at the medullar conus. All of the patients had cutaneous sign of the malformation (tumor, hair, fistula) and 13 children were with other coexisting anomaly (diastematomyelia -4, syringomyelia - 2, thick filum - 7). The follow up starts at the first examination (neonate - 60months) and in the average it last 6,75 years (18months - 19years). Clinical examination is done every 6 months under three years and once a year in older children. For indication of surgery we used 2 criteria: in all of the patients progressive worsening of the neurological function indicates operation. Or in children younger than 3 years, due to our criteria, operation should be prophylactic. For the evaluation of pre- and postoperative findings we used beside clinical examination electromyography, urodynamics and imaging methods (MRI, CT, x-ray, USG). The aim of the surgery is the eliberation of the tethered medulla together with partial, subtotal or total excision of the lipoma and dissection of the filum when present. Take away of the bony spur is part of the procedure, when it is at the same level, or elective operation later on. The operations are done under intraoperative monitoring control.

Results: Three patients stays without surgery, two asymptotic, one with slight dysfunction, which exist from the birth without changes. 22 children were operated on - in 21 patients we used one procedure and in one patient we performed three operations due to progressive changes. The first operation in 22 children was done at the age of 18,63 months (noeonate - 104months) in the average. Total resection of the lipoma was possible in seven patients, subtotal in 13 and only partial resection was done in five operations. Duraplasty was necessary in one patient. Bony spur was resected in two patients at the same procedure and in two patients it is planned in the future, because there is no progressive changes of the neurological function - follow up six and seven years postoperatively.
The main criteria to evaluate our approach in children with SL is functional status of the patient. Preoperatively six patients were asymptotic and postoperatively the number increased - 10 children are without dysfunction. The group of patients with progressive changes consists of 16 patients and the number decreased to 10 - the symptoms are stabilized. In two children we found better functional results, but still remains some dysfunction. And in two patients we measured progressive worsening, which we cannot manage by the surgery.

Conclusion: Spinal lipoma is controversial entity due to the results, which in some cases leads to the worse functional status of the child. Still we are finding the best approach. It seems, that prophylactic surgery should be done in the younger patients and sometimes just observation without surgery is method of choice.