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## DIFFERENCE BETWEEN WITH AND WITHOUT SACRAL AGENESIS IN THE SPINAL LIPOMA PATIENTS, WHICH WAS EVALUATED BY PRE-OPERATIVE URODYNAMIC STUDY AND MANAGEMENT METHODS OF THE LOWER URINARY TRACT.

### Aims of Study

Spinal lipoma is a rare congenital anomaly, and is well known as the origin of lower urinary tract dysfunction. And it is previously reported that the agenesis of sacrum is complicated with about 20% of the spinal lipoma patients. However, we feel that the rate of complicating spinal lipoma and sacral agenesis is much higher than the previous report. We planned to reveal the performance of the lower urinary tract dysfunction in patients with or without sacral agenesis.

### Methods

121 Japanese patients received operation of the spinal lipoma in our hospital in the period of 1974 - 2002. We retrospectively divided the spinal lipoma patients with sacral agenesis (SA+) and without sacral agenesis (SA-) by the plain X-ray film. In case the judgment is difficult, we check the computed tomography (CT) or magnetic resonance imaging (MRI) for dividing SA+ and SA-. Furthermore the pre-operative urodynamic study was evaluated retrospectively. We evaluated three parameters in the urodynamic study; neurogenic detrusor overactivity (evaluated 4 years old or older), low compliance bladder in filling cystometry and detrusor underactivity or acontractile detrusor during the voiding. From these parameters, one or more parameters were not observed in normal range, we divided the patients into abnormal UDS findings. The low bladder compliance was separated under 10ml/cmH<sub>2</sub>O. And we compared SA- patients with SA+ patients about the management methods of lower urinary tract. Chi square test and Fisher's test were used for statistical analysis.

### Results

In the spinal lipoma patients, SA+ patients were 57 patients (47.1%) and SA- patients were 64 patients (54.9%). There were no statistically difference in detrusor overactivity, bladder compliance and detrusor underactivity in the voiding phase. But the patients with abnormal UDS findings were statistically much higher ( $p=0.02$ ) in with sacral agenesis patients (table 1).

The follow up period for the patients were 72 months, the latest methods of the management of lower urinary tract were showed in table 2. The necessity of the clean intermittent catheterization for the patients was statistically higher in with sacral agenesis patients.

### Conclusions

In Japan, the ratio of the spinal lipoma patients with sacral agenesis was much higher than previous demonstration. Furthermore in patients with sacral agenesis, the lower urinary tract dysfunction was apparently higher than the without sacral agenesis.

Table 1

	Neurogenic detrusor overactivity	Low compliance bladder	Detrusor underactivity	The patients with abnormal UDS findings
SA -	42.8%	26.5%	11.4%	26.5%
SA +	66.7%	42.1%	27.6%	50.0%
P Value	$p=0.18$	$p=0.14$	$p=0.11$	$p=0.02$

Table 2

	Clean intermittent catheterization
SA -	28.6%
SA +	62.1%
P Value	P=0.024