



POSTER PRESENTATION

Open Access

Surgical treatment results and pathological features in pediatric occult tight filum syndrome

Jeff Julian¹, Michael Punsoni², John Donahue³, Ed Stopa⁴, Petra M Klinge^{5*}

From Hydrocephalus 2015

Banff, Canada. 18-21 September 2015

Introduction

Occult tight filum terminale syndrome (OTCS) is defined as a clinical syndrome of tethered cord and without “classic” radiographic evidence of low lying conus and/or fatty filum.

Methods

A consecutive series of 11 children (2-17 years) diagnosed with tethered cord syndrome (Triad of neurological, urological and orthopedic findings) since 2010, a non-diagnostic MRI, underwent microsurgical resection of the filum. Presenting symptoms and symptoms most responsive to surgery, imaging and pathology of the filum were analyzed.

Results

OTCS show the overall improvement in all dimensions of the clinical syndrome, e.g. scoliosis, walking and falling spells, incontinence and overall activity level due to improved pain. Increased tone in the lower extremities and foot deformities appeared as a negative predictor of improvement. Associated syringohydromyelia did not show any change in the 1 year follow-up MRI despite marked clinical improvement. Pathology shows a variety of features including “nerve twigs”.

Conclusions

The accuracy of the clinical TRIAD consisting of symptoms in the dimensions of bowel and bladder dysfunction, orthopedic and neurological signs to define “occult filum terminale or occult tight filum syndrome” and the accuracy of the clinical TRIAD to predict surgical success of detethering has to be explored and proven in a prospective fashion.

Authors' details

¹Neurosurgical Department, Rhode Island Hospital, USA. ²Neuropathology, Rhode Island Hospital, USA. ³Neuropathology, Rhode Island Hospital, USA. ⁴Neuropathology, Rhode Island Hospital, USA. ⁵Neurosurgical Department, Rhode Island Hospital, USA.

Published: 18 September 2015

References

1. Wikkelso C, Hellstrom P, Klinge PM, Tans JT: European iNPHMSG: The European iNPH Multicentre Study on the predictive values of resistance to CSF outflow and the CSF Tap Test in patients with idiopathic normal pressure hydrocephalus. *J Neural Neurosurg Psychiatry* 2013, **84**:562-568.
2. Brinker T, Stopa E, Morrison J, Klinge P: A new look at cerebrospinal fluid circulation. *Fluids and barriers of the CNS* 2014, **11**:10.

doi:10.1186/2045-8118-12-S1-P21

Cite this article as: Julian et al.: Surgical treatment results and pathological features in pediatric occult tight filum syndrome. *Fluids and Barriers of the CNS* 2015 **12**(Suppl 1):P21.

Submit your next manuscript to BioMed Central
and take full advantage of:

- Convenient online submission
- Thorough peer review
- No space constraints or color figure charges
- Immediate publication on acceptance
- Inclusion in PubMed, CAS, Scopus and Google Scholar
- Research which is freely available for redistribution

Submit your manuscript at
www.biomedcentral.com/submit



* Correspondence: pklinge@lifespan.org

⁵Neurosurgical Department, Rhode Island Hospital, USA

Full list of author information is available at the end of the article