A comparison of prophylactic and symptomatic detethering of patients with lumbosacral lipomas in a modern era

Albert Tu MD; Ross Hengel BSc; Douglas Cochrane MD, FRCSC

University of British Columbia and the Division of Neurosurgery at BC Children's Hospital

Introduction

Lumbosacral lipomas are the most common spinal dysraphism treated at the BC Children's Hospital (BCCH). Although patients may present asymptomatic, many deteriorate over time(1 - 4). Previous management included prophylactic detethering; however, recent studies have found deterioration rates similar to non operated patients(1 - 4).

At the BCCH Spina Bifida clinic, we present this information to families and offer two options: 1) untethering prior to the development of deficits or 2) close follow up and intervene when the patient becomes symptomatic. While prior series have compared patients from different periods or using historical data, few exist with patients managed concurrently.

Methods

A retrospective review of lumbosacral lipomas seen at BCCH in a modern era (ie. last 20 years) was carried out. All patients with a diagnosis of a lumbosacral limpoma were included with the exception of filum lipomas. Patients with incomplete records were also excluded.

Results

50 patients were identified. 19 were detethered after becoming symptomatic, while 25 underwent prophylactic surgery. 6 patients elected to undergo observation and have yet to require surgery.

Symptomatic patients were detethered after an average of 41.5 months, while prophylactic patients were detethered at 6.9 months ($p = 0.04$). Retethering occurred after 88 and 92.3 months ($p = 0.89$) after initial surgery respectively; however prophylactic patients were 97.5 months of age at the time of retethering while symptomatic patients were 147 months ($p = 0.07$).

Prophylactically treated patients also had 0.24 immediate surgical complications/patient compared to 0.32 in symptomatic patients ($p = 0.11$). Patients who did not retether after initial surgery were followed for 121.8 and 81.6 months ($p = 0.08$) respectively.

Outcomes trended towards being better in symptomatically managed patients with 84% remaining stable or improved in comparison to 68% of prophylactically treated patients ($p = 0.09$).

Conclusions

Prophylactically detethered patients tended towards higher rates of retethering. The average time to retethering was similar after surgery in both groups; however, symptomatically detethered patients tended to be older. Given the challenges of surgery in young children as well as the tendency for worse outcomes, delaying treatment until patients become symptomatic may improve long term stability.

Learning Objectives

By the conclusion of the session, participants should be able to 1) identify management strategies for patients presenting with asymptomatic lumbosacral lipomas; 2) recognize the complications associated with prophylactic and detethering after symptomatic worsening; 3) Be able to discuss some of the benefits of prophylactic and surgery after detethering; 4) Identify the long term outcomes associated with a given treatment strategy

References

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