

ORAL ABSTRACT

**HIGH FREQUENCY RADIOSURGERY:
SURGICAL ADJUNCT FOR LUMBOSACRAL LIPOMA RESECTION AND
SPINAL CORD DETETHERING**

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Introduction:

High frequency radiosurgery has recently been introduced into the discipline. The paucity of heat generated at the surgical site allows the surgeon to work in direct proximity to delicate structures. A wide variety of electrodes provide more intra-operative versatility. We utilized this technology in an attempt to attain a more complete resection of lumbosacral lipoma with accompanying tethered cord.

Methods:

Over a five year period, 28 patients ranging in age from 6 months to 5 years were treated for clinical and/or radiographic evidence of tethered cord with accompanying intradural lipoma. Standard method of lumbar laminoplasty were used to expose the lumbar thecal sac. Various Radiosurgical electrodes were used to resect lipoma in proximity to nerve roots and conus. All procedures had intra-operative monitoring.

Results:

Radical resection was achieved in all procedures. Nine patients had gross total resections that were confirmed by postoperative MRI. No new neurological deficits were recorded. Pathology confirmed the diagnosis of lipoma in all patients. To date, no evidence of retethering has been observed.

Conclusions:

High frequency radiosurgery can be a valuable adjunct in this venue where precision is mandatory. It greatly facilitated the dissection and removal of intradural lipomas. A significantly greater resection can be attained. This may result in a better outcome and reduce the incidence of future retethering.