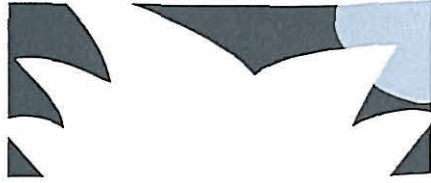


World Federation of Neurosurgical Societies



12th World Congress of Neurosurgery
Sydney 2001

RADIO FREQUENCY MODULATION SURGERY AS A SURGERY ADJUNCT TO THE RESECTION OF LUMBOSACRAL LIPOMA DETETHERING OF THE SPINAL CORD

Steven J. Schneider, M.D., Andrew J. Cohen, D.O.

*Division of Neurosurgery, Department of Surgery, Long Island Jewish Medical Center-North Shore
University Hospital, New Hyde Park, New York*

Radio Frequency Modulated Surgery (RFMS) was first introduced in 1970 and functions in the upper range of the radio wave spectrum. It also utilizes various waveform oscillation modifications to both refine and change the properties of the energy being emitted. The result is a radio wave transmitting electrode that can directly project energy to the immediate surrounding tissues. The effect generated is dependent on the waveform, duration, power setting and surface area of the electrode. The active electrode does not heat up, unlike electrocautery or laser, and there is minimal to no heat generated to the surgical site. This allows the surgeon to work in direct proximity to the functional neural elements which he is attempting to preserve. 30 patients with lumbosacral lipomas with intradural extension and tethering of the spinal cord were targeted for lipoma resection and detethering. In each case, RFMS was employed as a surgical adjunct during the procedure. In all patients, a gross or total or radical resection of intradural lipoma in addition to detethering of the spinal cord was achieved without complication. RFMS was felt to significantly facilitate many aspects of the procedure and represent an exciting new surgical adjunct. The utilization of RFMS may thereby empower the surgeon to accomplish a far greater resection of the intradural lipoma without damaging the involved adjacent spinal cord and nerve roots. The report will focus on the author's application of RFMS as well as its potential benefits for this complex procedure in which complications must be minimized.

ellman international, inc. 3333 Royal Avenue, Oceanside, NY 11572 U.S.A.

(800) 835-5355 • (516) 594-3333 • Fax: (516) 569-0054 • www.ellman.com