

## CO-ORGANIZED EVENT

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&amp;

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**Alfredo Pompili***Regina Elena National Cancer Institute, Italy***Unilateral laminectomy Approach for the Removal of Spinal Meningiomas, Schwannomas, Filum Terminalis Ependymomas, and Dermoid Tumors: Impact on Pain, Spinal Stability, and Neurologic Results**

**Background:** The traditional uni-multilevel bilateral laminectomy/laminotomy has been the safest approach to the spinal canal for the removal of intramedullary and extramedullary-intradural tumors. Yasargyl suggested a more conservative unilateral approach. The unilateral approach for the removal of spinal schwannomas and meningiomas is at present a well known procedure. We and others had very good results, mainly on postoperative and late back pain.

**Methods:** 97 patients were operated upon between June 2000 and March 2014. There were 70 patients with schwannoma and 27 with meningioma. Four had multiple tumors. The main symptom was pain. The evaluation according to the Dennis scale pain was extremely positive either at discharge or at one year follow up:  $p < 0.0001$  for schwannomas,  $p < 0.001$  for meningiomas. Neurological deficits, evaluated according to the modified McCormick scale, were recorded in 39 patients. Postoperative and late follow up improvement was significant either in schwannoma or in meningioma cases:  $p < 0.0001$ . The quality of life evaluation, using the Karnofsky Performance Scale, improved greatly:  $p < 0.0001$ . Late back pain at one year, that was recorded as a symptom by authors that used the bilateral approach, was neglectable in the present series. Filum terminalis tumors are unfrequent. They are mainly ependymomas; incidence is 1/3 if compared with lumbar schwannomas. 19 patients with lumbar ependymoma and 3 with dermoid/teratoma were operated upon. Two had multiple tumors. There were 11 females and 11 males, mean age was 42 yrs (17-83). 20 patients were operated upon with unilateral laminectomy, in the prone position, with fluoroscopy, and neurophysiological monitoring. Two had bilateral laminectomy for (coexisting stenosis, intraoperative strategy change). After a midline incision, the muscles are detached only on the selected side. Under magnification, laminectomy is done with high-speed drill and bone forceps. Removal all the cranio-caudal ligamentum flavum is important, it must be removed also under the bottom of the spinous process.

**Results:** Postoperatively, pain improved or disappeared in all patients ( $p < 0.001$ ). At one year 2 had some low back pain. The patient that was severely impaired did not recover, pain improved. The others were considered as grade I (McCormick scale). Excluding that patient, KPS improved to 95 points ( $p < 0.001$ ). Transient sphincterial worsening occurred in 3 cases. None had external bracing. One had CSF collection, treated with bed rest. No recurrences at follow up (1-10 yrs), apart from the metastatic tumor that died at 3 years. Those two young ladies with multiple tumors did not recur and are in good conditions at 9 and 10 yrs. This unilateral approach is suitable for filum ependymomas and dermoids and should be adopted in all high flow neurosurgical facilities.

**Biography**

Alfredo Pompili completed his Graduation at Rome University La Sapienza in 1976. He is a Resident in Neurosurgery at University of Rome, Regina Elena National Cancer Institute in Rome, and Official Resident of French Government at Hopital Foch in Suresnes, France in 1980. He is an Assistant Neurosurgeon in Neurosurgical Department of Regina Elena National Cancer Institute in Rome from 1978; an Associate Professor from 1989; Head and Chairman from 2008 to 2015. He is an author of more than 110 indexed papers.

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