Surgical approach of pelvic Schwannoma with concomitant uterine fibroid and endometriosis

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Introduction. Schwannomas (or neurilemomas) are encapsulated tumors made of benign neoplastic Schwann cells, less than 1% become malignant. Schwannomas grow from peripheral nerves or nerve roots in an eccentric manner with the nerve itself usually incorporated into the capsule.
The retroperitoneal localization represents only the 0,7 to 2,7%. In addition, the primary retroperitoneal tumors are very rare, and the Schwannomas only represent the 1 to 5% of them.
Even though retroperitoneal Schwannoma is usually a radiological finding, it may cause symptoms by a compression mechanism such as pelvic pain, neurological pain, radiculopathy, constipation or haematuria.
A pelvic Schwannoma can be difficult to differentiate from a uterine myoma as a result of a gynaecologic ultrasound. Furthermore, the long-standing schwannomas with advanced degeneration can exhibit calcification, hyalinization, and cystic cavitation.
Thus, this type of lesions that associate pelvic pain and radiculopathy in young women can be confused with the presence of endometriosis nodules affecting the sacral roots.

Case report. A 37-year-old woman, G2P0, presented with a 2 year pelvic and back pain, radiated down the right leg. Two uterine masses were identified at first abdominal ultrasound evaluation. The gynaecological ultrasound revealed a 10x6x5cm fundal myoma and a posterior 3cm mass not related to uterus.
Abdomino-Pelvic MRI confirmed the fundal myoma and a 3x3cm posterior solid pelvis mass, suggesting a neurogenic tumor.
Additional sacral MRI described a 32x33x37mm presacral rounded nodule. T1 sequences showed a homogeneous and isointense nodule and T2 a slightly heterogeneous in form of pseudonodules. It was situated at the right S3 sacral foramen, with a peripheral root. A schwannoma was the first diagnostic option.

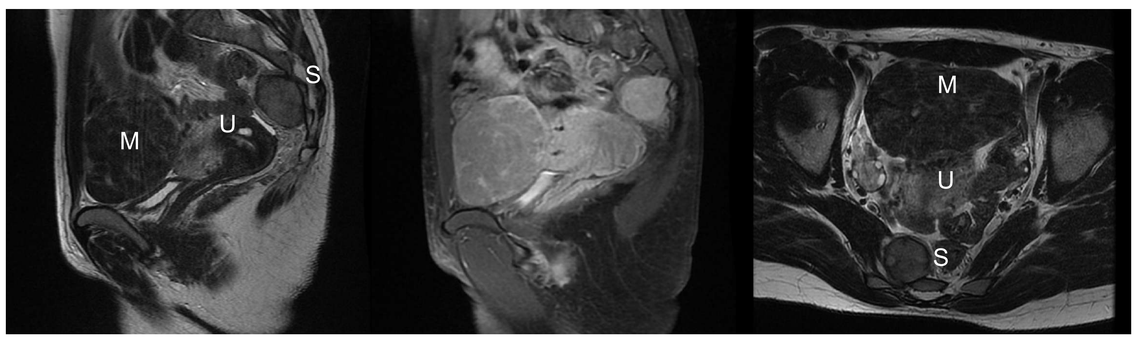

Figure 1. Abdomino-Pelvic MRI. S: Schwanoma. U: uterus. M: mioma.

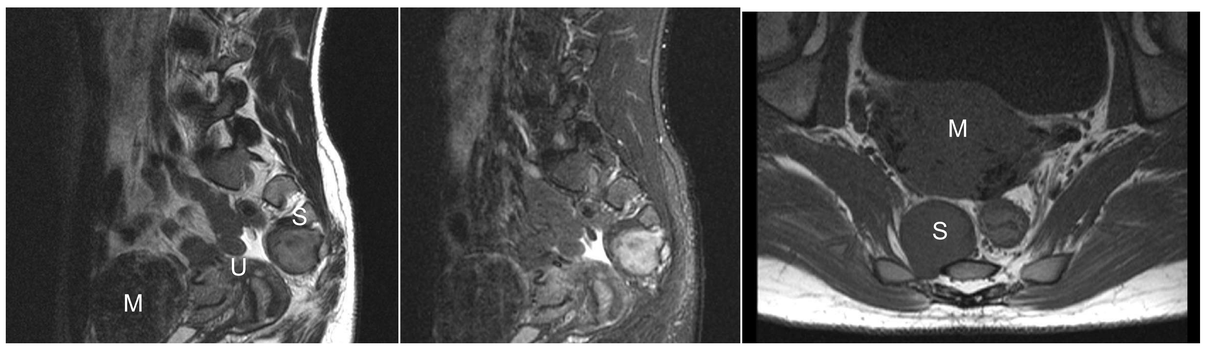

Figure 2. Sacral MRI. S: Schwanoma. U: uterus. M: mioma.

Surgical treatment was decided in a multidisciplinary laparoscopic approach by gynaecologist, general surgeons and neurosurgeons.
During laparoscopy the retroperitoneum was dissected below the uterosacral ligament to expose the 4cm presacral mass, that was excised preserving the nerve structures. Also, a myomectomy and suspicious peritoneum biopsies were performed.
Histologic examination identified the presacral mass as a Schannoma by its spindle cells, Antoni A type and Antony B areas. The immunohistochemical staining was positive both for vimentine and S-100. There were no signs of malignancy. Also, the fundal myoma and the endometriosis peritoneal focus were confirmed.
The patient was discharged on the second postoperative day. No major surgical complications registered.
MRI 3 months after surgery didn't find any recurrence.
After 7 months follow up, the patient did not present nor neurological deficit neither adverse functional outcomes.

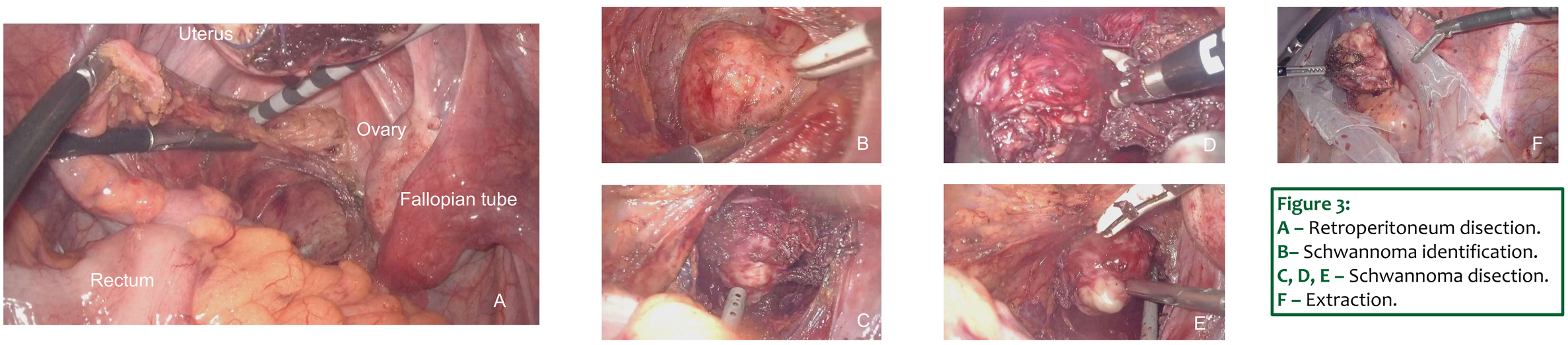

Figure 3:
A – Retroperitoneum disection.
B– Schwannoma identification.
C, D, E – Schwannoma disection.
F – Extraction.

Conclusions. Complete surgical excision is the treatment of choice for pelvic schwannomas. Histologic and immunohistochemical examination are the only way for a confirmation diagnosis, so even asymptomatic patients should undergo for surgical treatment. Concomitant gynaecological disorders (fibroids, endometriosis) should be considered or assessed. A multidisciplinary surgical approach would be recommended to preserve nerve structures, and avoid complications.

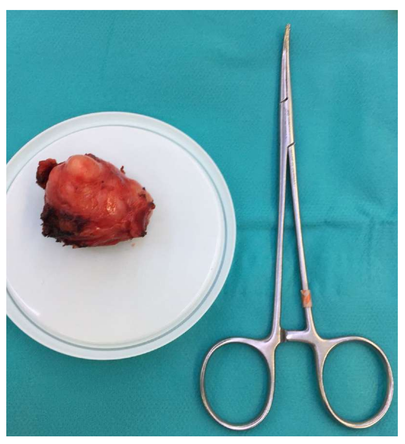

Figure 4:
Schwannoma.