Retroperitoneal schwannoma misdiagnosed as an ovarian malignancy

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SUMMARY

A 55-year-old woman presented to the hospital with abdominal discomfort over 3 months. Contrast-enhanced abdominal CT showed a 10×9×6.5 cm sized well-defined solid-cystic enhancing mass in the right pelvic cavity. Under general anaesthesia, exploratory laparotomy was performed on suspicion of ovarian malignancy. Pathological examination revealed a retroperitoneal schwannoma with highly ordered cellular component (Antoni A) and hypocellularity with predominantly loose myxoid component (Antoni B). On immunohistochemical staining, the sample showed typically positive result for S-100 in the cytoplasm of the tumour cells. Schwannomas are consisting only of Schwann cells and are most often non-malignant tumors. It is relatively slow growing and usually located in the head, neck and the extremities. Schwannomas are quite rare in the retroperitoneal region. The diagnosis of retroperitoneal schwannomas is often delayed and misdiagnosed as an adnexal tumour, especially locating in the pelvic cavity. Surgical complete resection of tumour is the treatment of choice and recurrence is unusual after complete resection.

DESCRIPTION

A 55-year-old woman presented to the hospital with abdominal discomfort for 3 months. A hard, fixed mass as large as two fists was palpated in the right lower abdomen on pelvic examination.

Contrast-enhanced abdominal CT showed a 10 × 9 × 6.5 cm sized well-defined solid-cystic enhancing mass in the right pelvic cavity (figure 1A). PET-CT showed a fluorodeoxyglucose-avid solid mass in the right ovarian fossa (figure 1B).

Under general anaesthesia, exploratory laparotomy was performed on suspicion of an ovarian malignancy. The uterus and both adnexa appeared normal, but a mass, the size of two fists, was found

Figure 2 Intraoperative findings: (A) a mass, the size of two fists, in the right retroperitoneal space close to the right adnexa. (B) Complete resection was performed.

in the right retroperitoneal space. No enlargement of lymph node around the mass nor metastasis was found. Intraoperative frozen section analysis suggested a benign mesenchymal tumour. Complete surgical resection was performed (figure 2).

Macroscopic examination revealed an 11×7×6.4 cm sized capsulated mass with solid, bright-yellow areas (figure 3A). Pathological examination revealed a retroperitoneal schwannoma with a highly ordered cellular component (Antoni A) and hypocellularity with a predominantly loose myxoid component (Antoni B). Immunohistochemical staining showed a predominantly positive result for S-100 in the cytoplasm of the tumour cells (figure 3B). After surgery, our patient is doing fine and no disease recurrence has occurred so far.

Schwannomas consist only of Schwann cells and are most often non-malignant tumours. The tumours are relatively slow growing and usually located in the head, neck and extremities. Schwannomas are quite rare in the retroperitoneal region. The disease occurs in individuals of all ages, with most cases diagnosed in people between the ages of 20 and 60.¹ The symptoms of schwannomas are highly non-specific and vary depending on the location and size of the lesion. The diagnosis of retroperitoneal schwannomas is often delayed

Figure 1 (A) Contrast-enhanced abdominal CT reveals a 10×9×6.5 cm sized well-defined solid-cystic, hyperechogenic enhancing mass in the right pelvic cavity. (B) PET-CT shows fluorodeoxyglucose-avid solid mass in the right ovarian fossa.

Figure 3 Gross finding and microscopic features of retroperitoneal schwannoma. (A) Capsulated solid mass after resection. (B) Classical palisade pattern in specific regions (Antoni A), loose myxoid component (Antoni B) and S-100 positivity of Schwann cells (×200).

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Learning points

- ▶ Schwannoma is a benign nerve sheath tumour composed of Schwann cells covering the peripheral nerves.
- ▶ The majority of schwannoma is found incidentally and misdiagnosed as other conditions both clinically and radiologically.
- ▶ We emphasise that it is necessary to attempt to differentiate the tumour origination from the retroperitoneal cavity when an adnexal tumour is detected.

and misdiagnosed as an adnexal tumour, especially due to the location in the pelvic cavity. The symptoms of schwannomas are highly non-specific and vary depending on the location and size of the lesion, such as abdominal discomfort, abdominal fullness or neurological symptoms.²

Complete surgical resection of the tumour is mandatory to avoid tumour recurrence, but care should be taken to avoid

damaging surrounding neurovascular structures. Conservative surgery may be performed instead to avoid damage to the surrounding blood vessels and nerve tissue, but the prognosis for this treatment is controversial.

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