

Laparoscopic resection of large pelvic lipoma causing obstructive uropathy in a 66 year old female — A case report from Greece

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Abstract

Lipomas are benign, usually asymptomatic, tumours and pelvic lipomas are extremely rare. We describe the case of a giant pelvic lipoma causing obstructive uropathy to a 66-year-old morbidly obese female treated in the 4th Surgical Department of the Medical School of Aristotle University of Thessaloniki in General Hospital "G. Papanikolaou" in March 2016. The patient presented with a history of nocturia and frequent daytime urination for 1 year. Her medical history included diffuse lipomatosis. Computer tomography revealed a giant pelvic mass which lead to left side hydronephrosis, hydrouterer and a pear-shaped bladder, with the differential diagnosis including pelvic lipoma or liposarcoma. An ultrasound guided biopsy excluded the diagnosis of liposarcoma. The patient was submitted to laparoscopic resection of the pelvic lipoma, with complete remission of urinary symptoms. The key-point is to consider the possibility that the pelvic mass is a well-differentiated liposarcoma and to manage it adequately and thus, we recommend intact excision of the mass through a wound protector, and extreme caution to avoid any rupture of the capsule.

Keywords: Hydronephrosis, Lipomatosis, Liposarcoma, Ureter.

Introduction

Lipomas are encapsulated benign tumours that can manifest at any body part that has adipose tissue. Solitary or multiple lipomas can occur in abdominal, retroperitoneal, vulvar, perineal or thoracic locations.¹⁻³ Cases of pelvic lipomas are seldom reported.¹⁻³ Pelvic lipomas may acquire considerable size and cause bladder outlet obstruction, pelvic pain, venous obstruction, constipation, sciatic hernia and sciatica, and lymphoedema.¹⁻³

Lipomas can often remain undetected until they cause symptoms because of their location or reach a large size.³ In the current case report, we present a giant pelvic

lipoma that caused hydronephrosis and we describe the diagnostic and therapeutic approach.

Case Report

A 66-year old morbidly obese (BMI 35 kg/m²) woman was referred to the 4th Surgical Department of the Medical School of Aristotle University of Thessaloniki in General Hospital "G. Papanikolaou" in March 2016 with a 1-year history of voiding symptoms in form of nocturia and frequent daytime urination without polyuria, significantly affecting her quality of life. She denied any pelvic or suprapubic pain. Clinical examination revealed no palpable mass or lower abdominal tenderness. Her past medical history included diabetes mellitus, rheumatoid arthritis, ischaemic heart disease, pemphigus and diffuse lipomatosis. She had two caesarean sections and excision of multiple benign subcutaneous lipomas. Her family history was unremarkable, except for her mother's diffuse lipomatosis. A contrast CT scan of the abdomen and the pelvis showed a well-circumscribed, encapsulated subserosal low attenuation mass on the left of the bladder, with no enhancement after intravenous contrast administration. The mass was compressing the bladder (pear-shaped bladder), displacing the left ureter medially and causing left hydrouterer and hydronephrosis (Figure-1).

The differential diagnosis included a large lipoma or liposarcoma of the pelvis. An ultrasound guided Tru-Cut biopsy was performed to rule out malignancy. No cellular atypia and no evidence of necrosis were observed.

Considering the radiological and histopathological findings, diagnosis of obstructive uropathy due to pelvic lipomatosis was made and laparoscopic resection was decided upon. During laparoscopy, after extensive adhesiolysis, a yellow, well-encapsulated preperitoneal mass was identified. Progressive dissection of the mass confirmed the compression and lateral dislocation of the left ureter and the bladder. The mass was excised intact without any rupture of its capsule. Part of the previous infraumbilical scar was incised for the extraction of the mass through a wound protector (Figure-2). Macroscopically, the lesion was 12,3x9,5x2,8 cm and

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Figure-1: a-c) Axial CT scans demonstrates a fat-attenuation mass with a faintly visible capsule. The mass displaces the uterus and the bladder to the right (a) causing extrinsic compression of the left ureter and as a result left hydronephrosis (b) and left hydronephrosis (c).

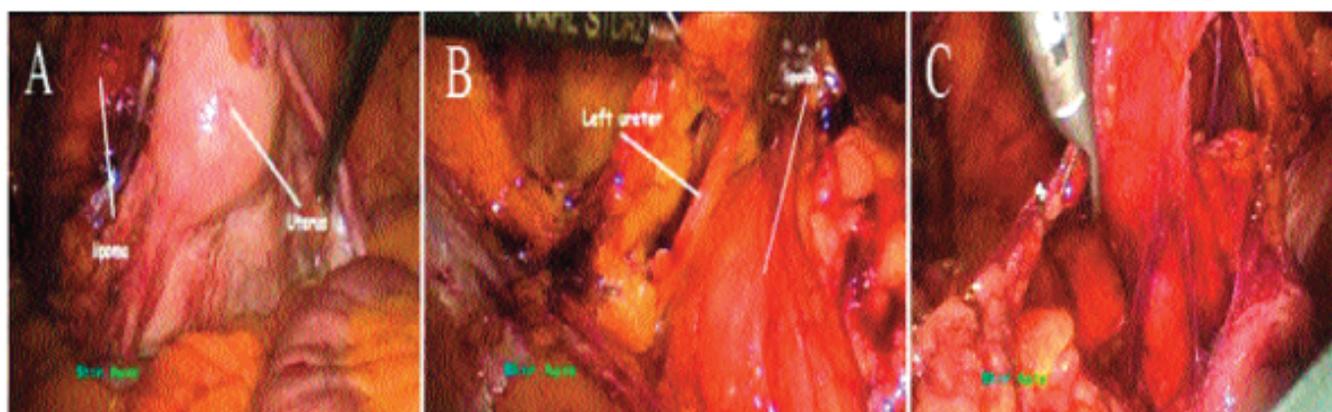


Figure-2: a-c) Laparoscopic view of the lipoma. The lipoma is located anterior to the uterus (a) displacing the left ureter (b). Ligation of the vascular pedicle of the mass (c).

histopathological findings were consistent with the diagnosis of lipoma.

The postoperative period was uneventful and the patient was discharged on the 1st postoperative day with immediate and complete remission of her urinary symptoms. Informed consent was taken from the patient for the publication of the current case report.

Discussion

Lipomas are the most commonly occurring mesenchymal tumours.³ Due to the absence of symptoms and their silent nature, the vast majority of lipomas tend to be ignored, so while lipomas exact incidence is not known it seems likely that it will be significantly higher than reported. Lipomas may present with an increased incidence in individuals who are obese, have hypercholesterolaemia or diabetes mellitus, and have a history of a traumatic injury and possibly have a familial tendency;⁴ most of these factors were applicable to our patient.

Lipomas usually present between the ages of 40 and 60,

but have been reported in all age groups. While solitary lipomas are more common in females, multiple lipomas, which is also called lipomatosis, are more common in males.⁵ It is generally accepted that retroperitoneal lipomas are quite rare and their diagnosis must be made cautiously. Lipomas are usually asymptomatic and if it causes symptoms, these are mostly produced by compression on adjacent structures and mass effect. The clinical findings that arise from adjacent structure compression, refer to the vascular system, the lower intestinal tract and the urinary system. Therefore, tenesmus, diarrhoea, thrombophlebitis and lower limbs oedema, suprapubic and perineal pain may be noted as well as dysuria, polyuria, haematuria (less frequently), nocturia, urgency, urinary retention and incontinence may⁶ be present. Moreover, renal failure may possibly develop due to hydronephrosis, like in our patient. On physical examination, one may observe abdominal tenderness, presence of a hypogastric palpable mass, arterial hypertension and oedema of lower extremities.

However, in the event of a retroperitoneal lipoma the first

diagnostic step and initial evaluation should be differential diagnosis of the benign or malignant nature of the lesion, based primarily on its radiological features.⁷ CT has an important role in characterizing and defining these lesions. There is a general understanding that the more centrally residing and deeper a fatty mass is located, it is more likely to be malignant. Malignant transformation of a benign lipoma to malignant liposarcoma is practically unknown.⁸ It is crucial that the diagnosis of a well-differentiated liposarcoma is established preoperatively, because there are differences in initial treatment, long-term management and prognosis.

The differential diagnosis of a pelvic soft tissue mass containing mainly fat includes lipoma, atypical lipoma, one of the lipoma variants or well-differentiated liposarcoma. CT can be used as a fundamental instrument on differential diagnostic procedure when the lesion consists predominately of fat (> 75% of mass volume), but also contains non-lipomatous mass-like areas, nodular or thickened septations, or prominent areas of enhancement within the tumour.⁹ CT findings that are indicative of malignancy are thick intralesional septa (>2mm), rapid growth and solid components.⁷⁻⁹ In case that CT results are considered insufficient, MRI should be done. In general, MRI, because of its superior soft tissue contrast resolution, is the proper method for characterization of tissues. Lately, positron emission tomography (PET) has been proposed for evaluation of fatty neoplasms in extremities to differentiate lipoma from liposarcoma by using standardized uptake value.¹⁰ However, this technique also seems to be inadequate for differential diagnosis between benign and low grade malignant fatty lesions.

In some cases histopathological examinations of a pelvic mass is necessary to confirm diagnosis. When biopsy is required, the typical ultrasound guided tru-cut biopsy for cytologic and histologic analyses is preferred.

Treatment options are limited. Conservative approaches such as corticosteroids, nephrostomy, ureterostomy and even radiotherapy attempts haven't shown to be

efficacious. The patient whose retroperitoneal tumour is diagnosed as lipoma will be cured by surgical resection.

Conclusion

For accurate management of a pelvic mass, which may be highly suggestive a benign lipoma, it is recommended to perform intact excision of the mass through a wound protector, and extreme caution to avoid any rupture of the capsule. In conclusion, it has been observed that overall fewer than 5% of all lipomas have recurrence, mainly because they are more difficult to resect completely.

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