CLINICAL CASE

Leiomyoma of the seminal vesicle: a case report and literature review


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KEYWORDS
Seminal vesicle; Leiomyoma; Mexico.

Abstract  Seminal vesicle anomalies can be classified as abnormalities of number (agenesis, fusion), canalization (cysts), and maturation (hypoplasia). Their importance lies in the frequency with which they are related to developmental abnormalities of other mesonephric derivatives. Primary tumors of the seminal vesicles are extremely rare and mesenchymal tumors are less frequent than those of epithelial origin.

The aim of this article was to describe a case of leiomyoma of the seminal vesicle and its management at the Hospital General “Dr. Manuel Gea González”.

A 37-year-old man with a past medical history of insulin-treated type 2 diabetes mellitus had symptom onset 7 days prior to seeking medical attention for moderate, continuous, colicky lumbar pain irradiating to the left flank and iliac fossa. Digital rectal examination found a non-suspicious, grade 1 adenomatous prostate. A kidney and suprapubic ultrasound revealed an image suggestive of a 2 x 2 cm, left paravesical lesion that was hyperechoic, homogeneous, and had well-defined edges. A urotomography (UroCAT) scan identified a dense, solid, 3 x 2 cm lesion between the base of the bladder and the left seminal vesicle. A transrectal ultrasound showed a lesion that was dependent on the left seminal vesicle. Diagnostic cystoscopy found a left parametal extrinsic compression. A 3 x 2 cm tumor of the left seminal vesicle was then laparoscopically resected and the histopathologic study reported leiomyoma of the seminal vesicle.

Ideal management data for seminal vesicle tumors are limited due to the lack of reported cases. Nevertheless, resection is the preferred option for these lesions.

There are 75 accepted cases of primary tumors of the seminal vesicle and 8 of them are benign: one schwannoma and 7 leiomyomas.

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Leiomioma de vesícula seminal reporte de un caso y revisión de la literatura

Resumen Las anormalidades de las vesículas seminales pueden ser categorizadas en anormalidades de número (agenesia, fusión), canalización (quistes) y maduración (hipoplasia); la importancia de éstas reside en la frecuencia con que se relacionan con anormalidades del desarrollo de otros derivados mesonéfricos. Los tumores primarios de las vesículas seminales son extremadamente raros, y los tumores mesenquimales son encontrados con menor frecuencia que los de origen epitelial.

El objetivo del presente artículo es describir el caso y manejo de un leiomioma de vesícula seminal, en el Hospital General “Dr. Manuel Gea González”.

Se presenta hombre de 37 años de edad, con antecedente de diabetes mellitus tipo 2 tratado con insulina. Inició 7 días previos a acudir a valoración, con dolor lumbar irradiado a flanco y fosas iliaca izquierda, tipo cólico, de moderada intensidad, continuo. Al tacto rectal con próstata adenomatosa grado 1, no sospechosa, se realizó ultrasonido (USG) renal y suprapúbico, donde se encontró imagen sugestiva de lesión paravesical izquierda, hiperecogénica, homogénea, de bordes bien definidos, de 2 x 2 cm. La urotomografía (UroTAC) reporta lesión de densidad sólida, entre base de vejiga y vesícula seminal izquierda, de 3 x 2 cm. Ultrasonido transrectal con lesión dependiente de vesícula seminal izquierda. En la cistoscopia diagnóstica se encontró compresión extrínseca parameatal izquierda. Posteriormente, se realizó resección de neoplasia de vesícula seminal izquierda por vía laparoscópica de 3 x 2 cm, con resultado de histopatología de leiomioma de vesícula seminal.

Los datos en el manejo óptimo de las neoplasias de vesícula seminal se encuentran limitados debido a la falta de casos reportados, sin embargo la resección de dichas lesiones es la opción preferida. Existen 75 casos aceptados de tumores primarios de la vesícula seminal, de los cuales 8 son benignos: un schwannoma y 7 leiomiomas.

Introduction

Seminal vesicle anomalies can be categorized into abnormalities of number (agenesia, fusion), canalization (cysts), and maturity (hypoplasia); their importance lies in the frequency with which they are related to developmental abnormalities of other mesonephric derivatives. Primary tumors of the seminal vesicles are extremely rare and mesenchymal tumors are found less frequently than those of epithelial origin. In 1910, Emmerich reported the first case of cystomyoma of the seminal vesicle, and since then isolated cases of benign tumors have been reported. Ideal management data of seminal vesicle tumors are limited, due to the lack of reported cases. However, resection of these lesions is the preferred option. Open exploration can be performed through a variety of approaches, which can be retropubic, transvesical, perineal, transrectal, and trans-sacral. The approach can also be combined with removal of the complete seminal vesicle; likewise there are reports of laparoscopic lesion excision.

Benign tumors are usually asymptomatic and can be discovered incidentally during surgery or autopsy.

The seminal vesicles are paired, sacculated structures located between the bladder and the rectum. The upper pole ends in a blind point, whereas the lower pole forms a straight duct that joins with the contralateral duct, becoming the ejaculatory duct. Asymmetry in shape and form of the seminal vesicles is normal and the right gland is generally slightly larger in one third of men.

The seminal vesicles develop in puberty and are androgen-dependent organs. During ejaculation, the secretions of the male reproductive tract are sequentially released and the final portion consists mainly of seminal vesicle fluid. The exact physiological role of the seminal vesicles is unknown, but its secretions can optimize the conditions for spermatic motility, transport, and survival.

The aim of the present article is to describe the case and management of a leiomyoma of the seminal vesicle at the Hospital General “Dr. Manuel Gea González”.

Case presentation

A 37-year-old man with a past medical history of type 2 diabetes mellitus treated with insulin (20 U intermediate and 15 U rapid) had symptom onset of his present illness 7 days prior to seeking medical attention. His symptoms were moderate, colicky, and continuous lumbar pain irradiating to the left flank and iliac fossa. At the physical examination, digital rectal exam identified a non-suspicious, grade 1, adenomatous prostate. A suprapubic renal ultrasound (US) study revealed an image suggestive of a left, hyperechoic, homogeneous 2 x 2 cm paravesical lesion with well-defined edges (fig. 1). A urotomography (UroCAT) scan corroborated the image of the lesion, with a solid density between the base of the bladder and the left seminal vesicle that measured 3 x 2 cm (figs. 2 and 3). A transrectal US showed a lesion dependent on the left seminal vesicle (fig. 1). Diagnostic cystoscopy found a left parametral extrinsic compression. A laparoscopic resection of the 3 x 2 cm left seminal vesicle tumor was performed (fig. 4) and the histopathologic study reported leiomyoma of the seminal
The patient is presently in the follow-up period and his progression is good.

**Discussion**

Transrectal and abdominopelvic US in the most useful initial diagnostic tool for patients with prolonged pelvic pain and other suspicious findings in the medical interview or physical examination; a subsequent computed abdominopelvic tomography scan can be ordered to evaluate renal abnormalities and define the presence of some other pathologic process of the pelvis. Other imaging studies such as excretory urography, magnetic resonance, and seminovesiculography can also be done when there is doubt about the etiology of the disease. Cystoscopy can identify an absent ipsilateral hemitrigone, an intravesical protrusion, and other anatomic abnormalities of the bladder. Imaging studies such as US, computed tomography, and magnetic resonance have improved diagnostic ability.

**Conclusions**

There are 75 accepted cases of seminal vesicle primary tumors, 49 of which are adenocarcinomas, 5 are sarcomas, and one is squamous cell carcinoma, contrasting with the benign tumors that are extremely rare with only 8 reported cases: one schwannoma and 7 leiomyomas.

**Conflict of interest**

The authors declare that there is no conflict of interest.
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