A Case of Primary Seminal Vesicle Cystadenoma

Ya-Xin Niu, Ai-Lian Liu, Jing-Jun Wu, Jiao-Jiao Zhu, Wei-Ping Yang

Department of Radiology, The First Affiliated Hospital of Dalian Medical University, Dalian Medical University, Dalian, Liaoning 116000, China

To the Editor: The primary seminal vesicle tumors are rare in clinical practice,[1] and the benign primary tumors are rarer. According to previous studies, the cystadenoma of seminal vesicle may possess various symptoms caused by different sizes and locations. Imaging and microscopic examinations could provide useful information in location and qualitative diagnosis. Here, we report a patient with benign cystadenoma on the right seminal vesicle.

A 59-year-old male was admitted on August 17, 2017, due to obstructive urinary symptoms for 2 years. Physical and laboratory findings were normal. On computed tomography (CT) images, there was a 9.8 cm × 9.8 cm oval cystic mass between bladder and rectum, and this mass contained partial solid components and surrounded by a well-defined border [Figure 1a-Id]. Magnetic resonance imaging (MRI) revealed a mass which was consisted of both cystic (maximal diameter [D] = 9.5 cm) and solid elements (D = 4.5 cm) between the bladder and rectum. Cystic elements presented slightly higher intensity than muscle on T1-weighted imaging (T1WI) and homogeneous hyperintensity on T2-weighted imaging (T2WI). Contrast-enhanced T1WI demonstrated that the cystic wall was evenly enhanced and the capsule space was not. Solid portion presented heterogeneous signs on both T1WI and T2WI. Contrast-enhanced T1WI showed mild-to-medium inhomogeneous enhancement on the solid portion, which was connected to the right seminal vesicle. Diffusion-weighted imaging showed low-signal intensity (diffusivity) on solid portion and hyperintensity on cystic portion. The left seminal vesicle, bladder, and rectum were compressed by the lesion. There was no local invasion nor metastatic lymph node [Figure 1e-1k].

The mass was removed by laparoscopic excision under general anesthesia. Through the surgical exploration, a cystic-solid mass, which was well defined and attached to the posterior bladder, was observed. The chocolate yellow cystic fluid was sucked out, and then the tumor was removed thoroughly. The patient was discharged 7 days after surgery, and the postoperative recovery was uneventful.

Macroscopically, the mass consisted of grayish-white mass (4 cm × 3 cm × 4 cm) and grayed cystiform tissue (7.5 cm × 6.0 cm). The thickness of cystiform tissue was 0.1–0.5 cm. The cut surface was moderate hardness, solid, and grayish yellow, and the locally multilocular cysts filled with gelatinous material were observed. Microscopically, multiple cysts with dilated cystic space were filled with homogeneous acidophilus granules. Cyst wall was lined by single-layer cubical epithelial cells. The cysts were separated by spindle fibroblast-like cell stromas without any atypia. Histological examination confirmed a cystadenoma of the right seminal vesicle [Figure 1I].

Primary seminal vesicle cystadenoma, which frequently involves middle-aged and elderly men, is a benign tumor originating from the embryological residues of the mullerian ducts. It was first reported in 1951.[2] Clinical symptoms of primary seminal vesicle include abdominal pain, perineal pain during ejaculation and defecation, dysuria, hematuria, rarely hemospermia, and sometimes may be asymptomatic.[3] The first symptom of the patient in our case was dysuria. It is notable that cystadenoma of seminal vesicle has characteristic in pathology. The cystic areas are lined with a single layer of cuboidal epithelium surrounded by a fibrous stroma. Stromal atypia, mitotic activity, necrosis, and the nuclear pleomorphism were absent in our case. According to Reikie et al.[4] viewpoint, our case may be classified as “low-grade mixed epithelial-stromal tumor.” From the analysis of patient’s imaging appearance, a significant cystic-solid mass was located between bladder and rectum; the outline was clear; and adjacent organs (left seminal vesicle, bladder, and rectum) were compressed. Our case showed no septa. In CT images, homogeneous cystic density and solid mass with high density were observed in the lesion. In MRI, the cystic-solid mass presented with mixed hypointense and hyperintense on T1WI. Solid portion presented inhomogeneous signal, and the cystic portion was homogeneous hyperintense on T2WI. In enhancement images, the solid components and cystic wall showed mild to medium and persistent enhancement, while cystic space was not enhanced. Above features were consistent with previous literature. The clear boundary, regular shape, and no infiltration might provide evidence to make a diagnosis of the benign lesion.[5] When uneven cystic wall and septum, irregular morphological solid components, invasion, and metastasis are observed, canceration should be taken into account. Up to now, invasive growth and metastasis have never been reported. With multidirectional imaging, MRI is more prone to specify the origin of the tumor and relationship with adjacent structures. Due to few cases reported, standard managements are controversial. A common strategy to treat seminal vesicle cystadenoma is laparoscopic ablation, because of less invasiveness, short hospitalization time, and rapid recovery. According to previous practices,

Address for correspondence: Dr. Ai-Lian Liu, Department of Radiology, The First Affiliated Hospital of Dalian Medical University, Dalian Medical University, Dalian, Liaoning 116000, China
E-Mail: cjr.liuailian@vip.163.com

Received: 18-07-2018 Edited by: Qiang Shi
How to cite this article: Niu YX, Liu AL, Wu JJ, Zhu JJ, Yang WP. A Case of Primary Seminal Vesicle Cystadenoma. Chin Med J 2018;131:2897-8.
related case reports, it is not appropriate to make the diagnostic decision based on needle aspiration biopsy because of not only multilocular organization but also high risk of recurrence and infection. In addition, we should ensure a negative surgical margin by intraoperative pathology to avoid recurrence.

Immunohistochemical is favorable for antidiastole, especially prostate-specific antigen (PSA), carcinoembryonic antigen, and carcinoembryonic antigen 125.

In summary, the main conclusions that we draw from this case are as follows:

1. Primary seminal vesicle cystadenoma is an uncommon, rare benign tumor;
2. MRI and CT examinations may be helpful to confirm the origin of the tumor, and histological examination can definitely diagnose it;
3. Cystadenoma of seminal vesicle should be removed, even in the absence of symptoms;
4. It is advisable to treat cystadenoma of seminal vesicle by laparoscopic ablation.

Declaration of patient consent
The authors certify that they have obtained all appropriate patient consent forms. In the form, the patient has given his consent for his images and other clinical information to be reported in the journal. The patient understands that his name and initials will not be published and due efforts will be made to conceal identity, but anonymity cannot be guaranteed.

Figure 1: (a) Noncontrast CT image showed a solid-cystic retrovesical mass. CT value of solid mass was about 56 HU, and that of cystic portion was about 16 HU; (b–d) Contrast-enhanced CT images showed a solid mass on arterial, venous, and delayed phase presenting with a mild to medium and persistent enhancement. CT value of solid mass on arterial, venous, and delayed phase was about 64 HU, 75 HU, and 62 HU, respectively; (e) T1WI image: cystic elements presented slightly higher intensity than muscle and solid portion presented heterogeneous signs; (f) T2WI image: cystic portion presented a homogeneous hyperintensity; (g–l) Contrast-enhanced T1WI images: solid portion presented with a mild-to-medium inhomogeneous enhancement and cystic space presented nonenhancement; (j) DWI image: solid portion was hypointensity, and cystic portion was hyperintensity, compared with muscle; (k) Sagittal T2WI image: a large mass might arise from the seminal vesicle, and bladder and rectum were oppressed with the lesion; (l) H and E staining results: innumerable cysts of varying sizes were filled with homogeneous acidophilus granules, with no malignant features. Cysts were lined by simple cubical epithelial cells, and the stromal cells were spindle-shaped (scale bar = 200 μm). CT: Computed tomography; HU: Hounsfield unit; T1WI: T1-weighted imaging; T2WI: T2-weighted imaging; DWI: Diffusion-weighted imaging.

Financial support and sponsorship
This work was supported by a grant from the Program for Training Capital Science and Technology Leading Talents (No. Z181100006318003).

Conflicts of interest
There are no conflicts of interest.

References
1. Katagiotis I, Sfoungaristos S, Duvdevani M, Mitsos P, Roumelioti E, Stravodimos K, et al. Primary adenocarcinoma of the seminal vesicles. A review of the literature. Arch Ital Urol Androl 2016;88:47-51. doi: 10.4081/aiua.2016.1.47.
2. Soule EH, Dockerty MB. Cystadenoma of the seminal vesicle, a pathologic curiosity. Report of a case and review of the literature concerning benign tumors of the seminal vesicle. Proc Staff Meet Mayo Clin 1951;26:406-14.
3. Arora A, Sharma S, Seth A. Unusual retrovesical cystic mass in a male patient. Urology 2013;81:e23-4. doi: 10.1016/j.urology.2012.10.022.
4. Reikie BA, Yilmaz A, Medlicott S, Trpkov K. Mixed epithelial-stromal tumor (MEST) of seminal vesicle: A proposal for unified nomenclature. Adv Anat Pathol 2015;22:113-20. doi: 10.1097/PAP.0000000000000057.
5. Campi R, Serni S, Raspollini MR, Tuccio A, Siena G, Carini M, et al. Robot-assisted laparoscopic vesiculectomy for large seminal vesicle cystadenoma: A Case report and review of the literature. Clin Genitourin Cancer 2015;13:e369-73. doi: 10.1016/j.clgc.2015.02.011.