Transperitoneal laparoscopic treatment for recurrence of a giant multilocular prostatic cystadenoma: A case report and review of the literature

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DISCUSSION

We described a large, multilocular, cystic retrovesical neoplasm composed of cysts and glands lined by histologically benign cuboidal or columnar epithelium and surrounded by hypocellular stroma. This kind of rare lesion was first described by Watanabe et al. (1) in 1990. The multilocular prostatic cystadenoma can occur in patients of various age but has been reported to range from 15 to 80 years; it is usually a retrovesical mass that varies in size, anatomically separated from the prostate and contiguous structures, or attached by a pedicle to the prostate (2-7). The clinical presentation in all patients with multilocular prostatic cystadenoma included obstructive voiding symptoms with or without a palpable abdominal mass; in some cases the patient main symptom was azoospermia, likely caused by compressed seminal vesicle. In all reported cases, the diagnosis was made following surgical resection, but the anatomical relationship of the mass to the native prostate varies. It is located in the midline between prostate and rectum and may arise from the prostate gland either in continuity with the prostatic urethra or separated from it, sometimes it may arise as a lesion distinct from the prostate gland. Retrovesical and retroperitoneal multilocular tumors that should be differentiated are diverse and include the phylloides variant of atypical prostatic hyperplasia, mesenchimal neoplasms (benign or malignant) (7), multilocular peritoneal inclusion cysts (8), lymphangiomas (9), mullerian duct cysts, seminal vesicle cysts (10), sarcoma of the prostate, prostatic leiomyoma, echinococcal cysts of the prostate, cystic dilatation of the utricle, prostatic abscess, diverticulum of the ejaculatory duct or ampulla of the vas deferens, teratoma and prostatic cystic carcinoma (11-12). Prostatic cystadenomas do not invade adjacent organs, they produce a mass effect on them. Rusch et al. (12) reported that radiographic evidence of invasion of the adjacent structures primarily excludes the possibility of a giant multilocular prostatic cystadenoma. The cystic spaces of the cystadenoma is lined by a single line of cuboidal cells, with nuclei presenting no atipia or prominent nucleoli. These cells appear similar to the prostatic acinar columnar cells that co-express prostate specific antigen and prostate acid phosphatase. In contrast the cells lining the cystadenocarcinoma show nuclear stratification and papillary proliferations; nuclear enlargement and prominent nucleoli are uniformly present. The growth pattern of cystadenocarcinoma is invasive, with haphazard destruction of intervening prostatic parenchyma and aggressive invasion into the periprostatic adipose tissue (13). Immunohistochemical staining for PSA may be helpful in establishing the prostatic epithelia origin of the mass; however it seems that serum PSA helps little in establishing the diagnosis; even needle core biopsies of the prostate may be inconclusive and usually reveal benign prostatic tissue. Computed tomography (CT) and in particular MRI can provide information on a large multicystic process originating from the prostate, but a clear origin cannot always be determined. According to Kirsch et al. (7) transrectal MRI can be helpful in defining the extent and architecture of the lesion, as well as showing the absence of local invasion. Although imaging studies are useful for determining the extent and invasiveness of the lesion, it is difficult to diagnose GMPC, despite extensive radiologic assessment (transabdominal and transrectal ultrasound, CT and MRI of the pelvis), and only by histology is a clear and definite diagnosis possible. The natural history of prostatic cystadenoma remains unknown and opinion on the optimum management strategy is divided. Some reports in literature confirm that multilocular cystadenomas are indeed analogous to the prostate gland in term of their susceptibility to oncogenic transformations. Treatment options include surgical or endoscopic excision, transurethral drainage or aspiration via a transperineal or transrectal approach depending on their size and location. Matsumoto et al. (11) have reported that surgical excision may not be necessary, even if most authors recommend it. This is perhaps justified for a number of reasons. Firstly, as mentioned, definitive diagnosis still remains histological. Furthermore, although they usually are benign lesions, some authors consider cystadenomas as locally aggressive and possibly adherent to surrounding viscera and, considering the risk of recurrence following surgery, they strictly advice pelvic exenteration with
complete excision of the prostatic lesion (14). According to our experience such approach looks too much aggressive, especially considering that also a minimally invasive approach allows a histological diagnosis; in addition GMPC is generally a benign condition with a probability of malignant degeneration comparable to any other benign prostatic disease. In our case report besides, the previous conservative approach allowed the patient to ensure the preservation of urinary and sexual functions for a period of 16 years, offering a definitely excellent quality of life.

In the case reported by Maluf et al. (2) incomplete resection led to a recurrence that was successfully treated with pelvic exenteration while in the case reported by Datta et al. (3) a recurrent tumor was treated with a luteinizing hormone-releasing hormone agonist. In Table 1 we show a comparison of clinical findings, mass size, PSA level, treatment and follow up of GMPCs reported in literature. Actually the incidence of recurrence is difficult to judge since many reports are silent on this matter. Since our case was also associated with a local recurrence, we believe that there is a significant chance of this complication; however, we believe that a wide local excision is adequate to successfully remove the tumor and any asymptomatic recurrences should be initially managed conservatively as the tumor may regress with no active treatment.

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