

Giant Multilocular Prostatic Cystadenoma In A 15-Year Old: Radical Surgery Not Necessary

R Sarvanandan, R Thangaratnam

Citation

R Sarvanandan, R Thangaratnam. *Giant Multilocular Prostatic Cystadenoma In A 15-Year Old: Radical Surgery Not Necessary*. The Internet Journal of Surgery. 2009 Volume 22 Number 1.

Abstract

Giant multilocular prostatic cystadenoma is a rare benign tumour of the prostate, with approximately 19 reported cases in the world. We present the youngest reported case. A 15-year-old male presented to the emergency department with lower abdominal pain and urinary retention. Abdominal examination revealed a tender and palpable bladder. CT scan showed a multiseptated cystic mass in the recto-vesical region, and a laparotomy was performed to remove the mass. The tumour measured 11x9x5cm, and consisted of multi-loculated cysts filled with clear and haemorrhagic fluid. Microscopically, the glands were lined by benign prostatic-type epithelium with cystic dilatation. A diagnosis of giant multilocular prostatic cystadenoma was made. At 2-month follow-up, a residual tumour was identified on a CT scan; however, unlike previously reported cases; this tumour regressed in size at 10-month follow-up without active interventions. We believe radical surgery is not necessary to manage this tumour as previously recommended.

INTRODUCTION

Giant multilocular prostatic cystadenoma is a rare benign tumour originating around the prostate gland. We could find only 19 reported cases in the world¹⁻⁹. We present what may be the youngest case ever reported.

CASE REPORT

A 15-year-old boy presented to the emergency department with lower abdominal pain, a 2-day history of dysuria, and a 7-hour history of inability to pass urine. The patient did not report any episodes of haematuria, fever, or loss of weight, but complained of loss of appetite. He had no other medical or surgical problems.

Abdominal examination elicited suprapubic tenderness, and the superior border of the bladder was palpable. Digital rectal examination revealed a mass at the anterior anus wall, which bled on contact. Bladder catheterisation produced dark coloured urine, and urinalysis was normal.

The kidney-ureter-bladder (KUB) plain X-ray was unremarkable, with no urinary tract calculi. Computed tomography (CT) (figure 1) scan identified a complex multi-septated cystic mass in the recto-vesical region with a well-defined wall. The mass compressed and displaced the sigmoid colon to the right, whilst also indenting the distal ureters bilaterally. Radiological differential diagnosis

included cystic lymphangioma and mesenteric cyst.

An exploratory laparotomy performed through a lower midline incision revealed a large multiloculated cystic mass arising from the pelvic floor. The bladder and the left ureter were displaced anteriorly to the right side, while the right ureter was not identified. The retroperitoneal space was opened and the mass was enucleated in toto with blunt dissection. The patient developed profuse bleeding from torn vessels and the pelvic plexus, which required packing of the pelvic cavity. The abdominal packs were removed after 72 hours, and the postoperative period was uneventful.

Figure 1

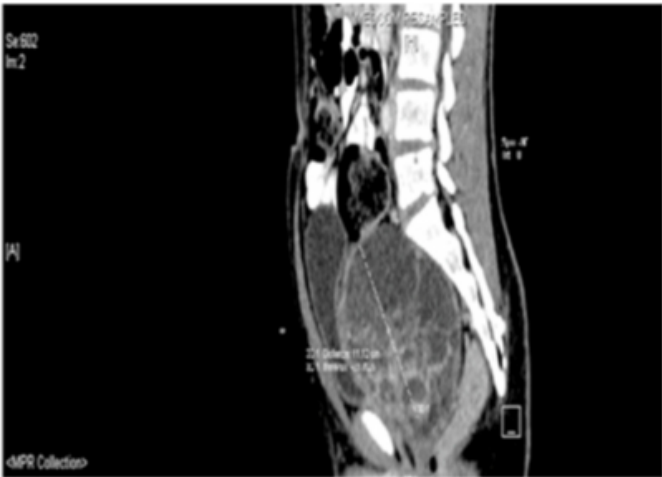


Figure 1

Figure 1: CT scan of the Pelvis.
A Complex cystic mass seen in the pelvis in the rectovesicle region measuring 11cmX9.7cm(axial)X11.1cm. It was multiseptated with prominent septation in the inferior aspect. The mass had well defined wall with no surrounding streakiness, fat component or calcification. The mass was noted to compress and displace the sigmoid colon to the right with no abnormal dilatation of the proximal colon.

Figure 2

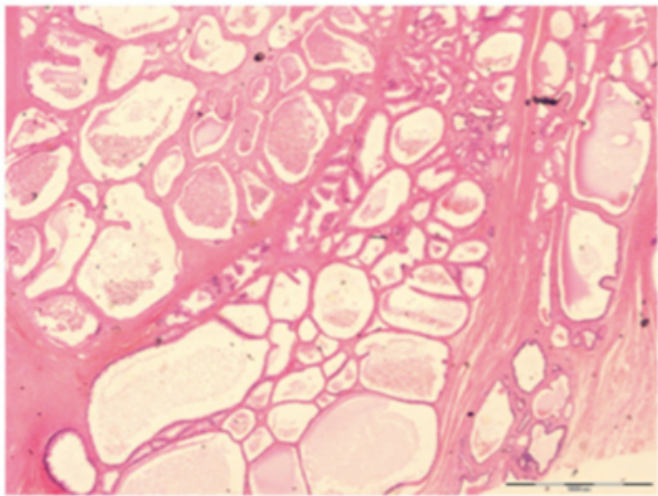


Figure 2

Figure 2: Histopathology slide with H&E staining.
Low power view with routine H&E stain shows many prostatic glands, some of which are cystically dilated. Only prostatic tissue can be seen on this slide. (X2)

Figure 3

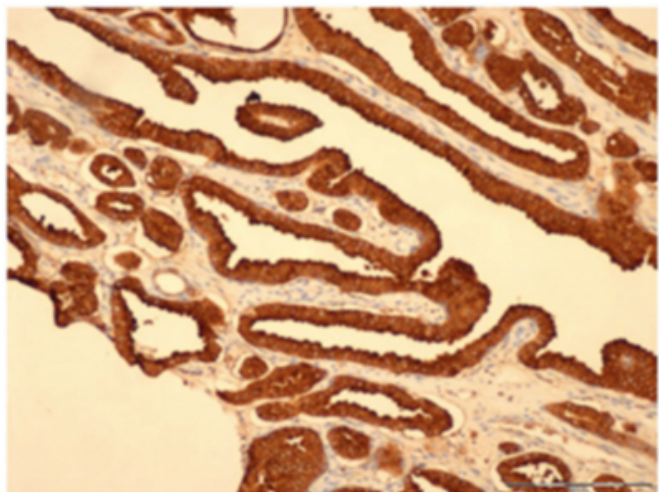


Figure 3

Figure 3: Histopathology slide with PSA staining.
Positive Immunohistochemical staining with PSA (prostate specific antigen) confirms that the glands are prostatic in origin. (X10)

The tumour measured 11x9x5cm, and consisted of multiloculated cysts filled with clear and haemorrhagic fluid. Cytological analysis of the cystic fluid showed mainly degenerated cells and red blood cells. Microscopically; the tumour exhibited signs of proliferation. The glands were lined by benign, two-tiered prostatic-type epithelium with cystic dilatation (figure 2). Immunological staining with prostate-specific antigen (PSA) was strongly positive (figure 3). The tumour and the cystic fluid showed no signs of malignancy, and a diagnosis of giant multilocular prostatic cystadenoma was made.

A CT scan at 2-month follow-up showed a residual mass measuring 5x4x5.8cm and as the patient was asymptomatic; we decided to conservatively manage the tumour with regular clinic follow-up. Although the lesion was still present at a repeat CT after 10 months, it was noted to have significantly regressed from the original size to 3.2x2.5x4.1cm.

DISCUSSION

Prostatic cystadenoma is a rare benign tumour of the prostate, and typically grows very large before it becomes symptomatic. Only nineteen¹⁻⁹ cases have so far been reported in the world. Nearly all patients have been over the age of 40, the mean age of reported cases being 54 years. Patients present with retention or other features of urinary obstruction, due to the large size of the mass. Rarely, patients may complain of haematuria, dysuria, polyuria, and

lower abdominal pain. The mass can sometimes be felt during abdominal examination, and a digital rectal examination may reveal an enlarged prostate with multiple lobulations.

Serum PSA may be elevated; however, previous case reports show no correlation between the size of the mass and PSA levels¹. The CT scan will typically demonstrate multiloculated cysts in or around the prostate gland. However, the diagnosis is usually confirmed following histopathological analysis of the excised tumour.

Although prostatic cystadenoma can reach a very large size (the largest reported tumour weighed 6.5kg²), it does not appear to invade surrounding tissues and organs³. Histopathological analysis and positive staining with PSA confirms the prostatic origin of the tumour. Most surgeons have treated the tumour by simple resection, or enucleation⁴ (including our case), but anterior pelvic exenteration⁵ has also been reported. Two earlier cases reported a recurrence following surgical resection; with one using localised radiotherapy², and the other using GNRH⁶ for disease control. Some of the other reports were silent on this matter; therefore the actual incidence of recurrence is difficult to judge. 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 tumour, and any asymptomatic recurrences should be initially managed conservatively as the tumour may regress with no active treatment.

ACKNOWLEDGEMENTS

Professor Suneet Sood (Faculty of Medicine, Universiti Teknologi Mara, Malaysia) for his general advice and proof reading this case report.

Dr. Shiran Bin Mohd Sidik (Consultant Pathologist, Universiti Putra Malaysia, Malaysia) for reporting and providing us with the histopathology slides.

Dr. Woong Soon Li (Consultant Radiologist, Hospital Sungai Buloh, Malaysia) for reporting and providing the CT images.

References

1. Park JP, Cho NH, Oh YT, et al. Giant multilocular prostatic cystadenoma presenting with obstructive aspermia. *Yonsei Medical Journal* 2007; 48(3): 554-556.
2. Maluf HM, King ME, DeLuca RF, et al. Giant multilocular prostatic cystadenoma: a distinctive lesion of the retroperitoneum in men. A report of 2 cases. *Am J Surg Pathol* 1991; 15: 131-135.
3. Rusch D, Moinzadeh A, Hamawy K, Laren C. Giant multilocular prostatic cystadenoma: a case report. *AJR Am J Roentgenol* 2002; 179: 1477-1479.
4. Kirsch AJ, Newhouse J, Hibshoosh H, O'Toole K, Ritter J, Benson MC. Giant multilocular cystadenoma of the prostate. *Urology* 1996; 48: 303-305.
5. Wantanabe J, Konishi T, Takeuchi H, Tomoyoshi T. A case of giant prostatic cystadenoma. *Hinyokika Kiyo*. 1990; 36: 1077-1079.
6. Datta MW, Hosenpud J, Osipov V, Young RH. Giant multilocular cystadenoma of the prostate responsive to GnRH antagonists. *Urology* 2003; 61: 225.
7. Tuziak T, Spiess PE, Abrahams NA, Wrona A, Tu S, Czerniak B. Multilocular cystadenoma and cystadenocarcinoma of the prostate. *Urologic Oncology* 2007; 25: 19-25.
8. Ganesan S, Ganesan K, Joshi M. Giant multilocular prostatic cystadenoma. *J Ultrasound Med* 2006; 25:795-798.
9. Hauck EW, Battmann A, Schmelz HU, Diemer T, Miller J, Weidner W, Knoblauch B. Giant multilocular cystadenoma of the prostate: a rare differential diagnosis of benign prostatic hyperplasia. *Urol Int* 2004; 73: 365-369.

Author Information

Romesh Sarvanandan, MBBS

Foundation Year 1 Trainee, Imperial College Healthcare NHS Trust

Ramesh Thangaratnam, FRCS

Consultant General Surgeon, Hospital Sungai Buloh