

Functional medicine

Surgical excision of an acutely symptomatic subpubic cartilaginous cyst in a 70 year old male

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Introduction

Subpubic cartilaginous cysts (SCC) are rare entities that can cause perineal pain.¹ Though more common in females, one case has been described in a male, where the patient was successfully treated conservatively.² We present a case of SCC in a male with severe symptoms who required surgical excision.

Case presentation

A 70 year old male with a history of erectile dysfunction, who was using penile injection therapy, developed penile pain about six months after initiating therapy. Despite discontinuation of the injections, the patient's pain progressively worsened in the subsequent months. The pain was described as intermittent, sharp and localized to the glans, mainly on the right side. An MRI of the pelvis revealed a 2.7 cm cystic mass arising from the inferior aspect of the pubic symphysis, which was compressing the penis at the base (Fig. 1A and C). Shortly thereafter, the patient presented with acutely worsening penile pain, penile numbness and color change. His pain was now more distributed to the base of the penis. Genitourinary physical exam was consistent with a palpable, midline mass deep to the perineum; however the mass was not palpable on suprapubic examination and the patient was not tender to palpation in the penile area. A duplex ultrasound revealed no blood flow compromise to the penis.

Due to the patient's severe uncontrollable pain we proceeded with an open incisional biopsy, and if benign, as expected, complete removal

of the mass. After informed consent was obtained, the patient was taken to the operative room, and placed in the dorsal lithotomy position. Initial cystourethroscopy revealed an extrinsic mass effect on the dorsal bulbous urethra. A Foley catheter was kept in place and a vertical midline perineal incision was made. Dissection was carried down through the bulbospongiosus muscle, where the bulbar urethra and corpora cavernosa bodies were identified. A plane was then made between the bulbar urethra and corpora bodies, exposing the contour of the mass (Fig. 2A). An intra-operative biopsy of the mass demonstrated benign, cartilaginous fragments. The mass was then removed by dissecting the plane between the corpora cavernosum and the mass, and carried laterally and superiorly to the level of the bone. There was some noted fixation of the mass to surrounding structures and care was taken to protect the urethra and surrounding structures. The mass was then removed via electrocautery, in a piecemeal manner. There was some bleeding encountered at the base of the penis, near the inferior pubic region, which was controlled with figure of eight sutures (Fig. 2B). Repeat cystoscopy confirmed no injury to the urethra. The incision was closed at the layers of the bulbospongiosus muscle, dartos tissue and the skin in standard fashion. The final pathological specimen (Fig. 2C) was composed of fibrocartilaginous and fibrinous material, consistent with a cartilaginous cyst.

Post-operatively, the patient's pain had completely resolved, though he had some numbness in the penile area. He was discharged on post-operative day one. He returned to the clinic one month later, where he described complete resolution of his penile pain, though he had persistent numbness of penis and persistent erectile dysfunction. Exam

Abbreviations: SCC, Subpubic cartilaginous cyst

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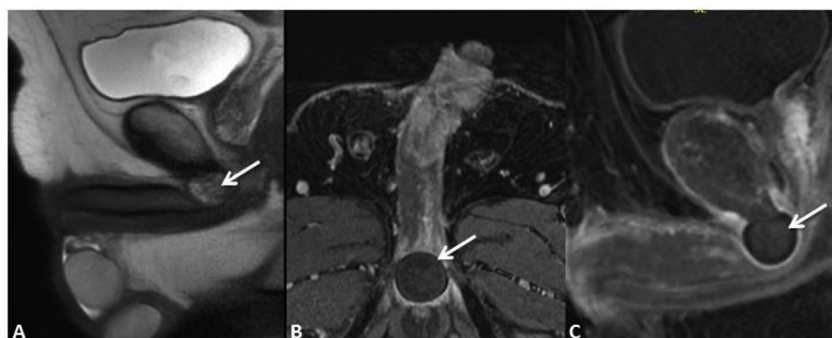


Fig. 1. MRI of the pelvis illustrating a subpubic, 2.7 cm well-circumscribed, heterogenous-signal, cystic mass (arrow) that impresses on the superior aspect of the penis at its base in the T2 sagittal (A), T1 axial (B) and sagittal (C) phases.

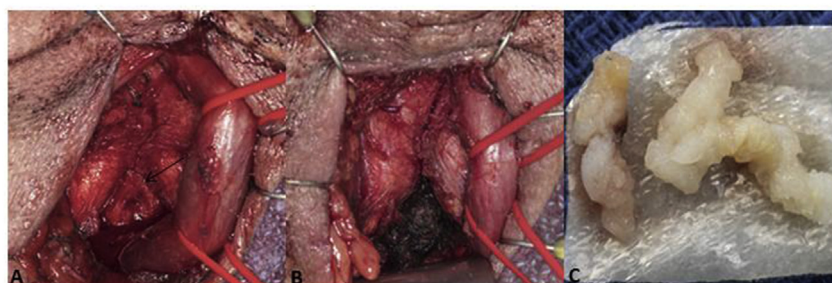


Fig. 2. Images during the operation. (A) Depicts retracted bulbar urethra, exposing a raised area (arrow) in between the corpora, representing the lesion. (B) After complete surgical excision of the mass. (C) Surgical specimen.

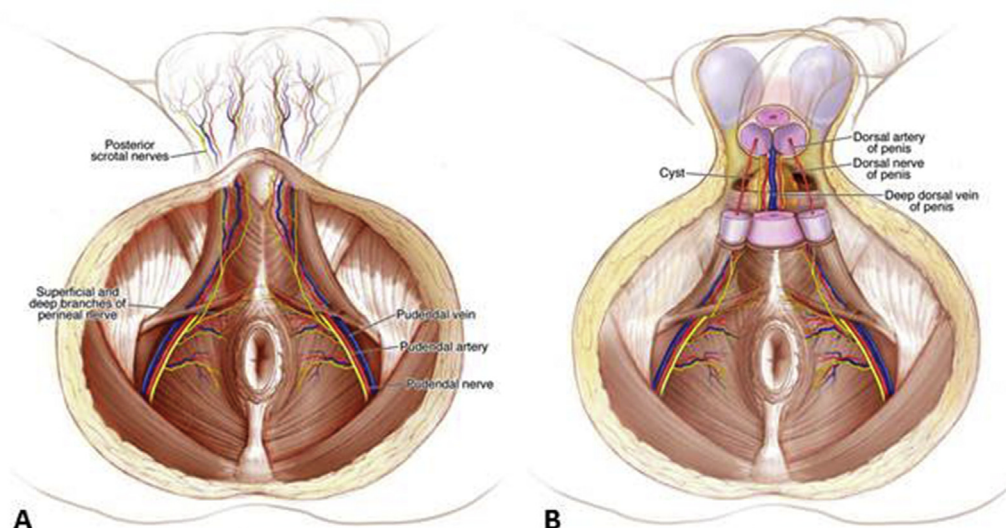


Fig. 3. Male perineal neurovasculature. Illustrations of the superficial (A) and deep (B) male perineal neurovasculature, with (B) illustrating the intimacy of the subchondral cyst with the surrounding neurovasculature.

demonstrated good healing of his incisions; however he had numbness to palpation of his penis.

Discussion

In the aforementioned case, we described a patient with a symptomatic SCC causing pain whom we successfully performed surgical excision of, resulting in resolution of pain.

SCCs are uncommon entities that have most commonly been described in females with various symptoms including perineal pain, urinary retention, dyspareunia, and/or lower urinary tract symptoms.¹

Their source is not completely understood, but it has been suggested that their development may be related to degenerative changes around the pubic symphysis.³ Surgical excision is typically performed in symptomatic patients with excellent outcomes and no evidence of recurrence.³ Though most cases have been reported in females, there is one case that has been described that involved a male. The patient's symptoms included perineal pain, numbness, and sexual dysfunction. Symptoms were mild and the patient was managed conservatively. After a 6 month follow up, the patient expressed mild improvement of overall symptoms. Also of note, the patient had a follow-up MRI performed consistent with a reduced cyst size from 2.5cm to 1.0 cm.²

This case presented considerations that are extremely important when operating in the perineal area. Specifically, the neurovascular components in the perineum are complex and have significant implications when injured, as nerves in this region have various functions (i.e. sensation, motor, erectile). Fig. 3 illustrates the deep and superficial male perineal anatomy encountered during such dissections. An important structural/functional consideration in this patient's case is the course of the dorsal nerve of the penis, as although it can typically be avoided in perineal dissections, its close relationship to the inferior aspect of pubic symphysis, base of the corpora and bulbourethral make it susceptible to the deep perineal dissections such as in this case.⁴

SCC is a rare entity with a spectrum of symptoms in affected patients. In this patient, symptoms were neuropathic and initially concerning for vascular compromise. Due to the acuity of presentation, surgical excision was recommended. The patient's pain resolved, however his erectile dysfunction has continued to be an issue. It is likely that there was some nerve damage with the extensive dissection during surgery and thus, the patient's potency options will likely include external devices (i.e. vacuum assisted) or surgical intervention (i.e. implantable penile prosthesis). Because the natural history of SCC is not fully understood, we will monitor the patient with an additional follow up visit and pelvic MRI 1 year after surgery to evaluate any evidence of disease recurrence.

Conclusion

Subpubic cartilaginous cysts are rare entities that typically occur in females. Cyst excision can be helpful for patients who have symptoms.

There is no evidence to indicate that these lesions have malignancy potential or the ability to recur.

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