Case Report

Bladder teratoma with pilimiction in a male adolescent

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Abstract Teratomas are tumors consisting of two or three germ layers, seen commonly during childhood. Mature teratomas are benign and demonstrate well differentiated tissues such as sebaceous glands, hair, and teeth. Bladder is a very rare extragonadal site for teratoma, moreover so in adults. Presentation may vary from with irritative lower urinary tract symptoms or urinary retention to pilimiction (passage of hair in the urine). We hereby present a case of mature teratoma of the urinary bladder, with a classical symptom of pilimiction, in a 22-year-old male patient, which to our knowledge is the first male case reported in the literature.

Keywords: Dermoid cyst, teratoma, urinary bladder calculi, urinary bladder neoplasms

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INTRODUCTION

Teratoma is a type of germ cell tumor (type-1), containing all the three primitive germ cell layers of an embryo. They are seen commonly during childhood or in the age group of 10–30 years; they demonstrate well-differentiated tissues such as elements of bone, cartilage, teeth, hair, sebaceous gland, and squamous epithelium. Mature teratomas are benign, commonly occurring in adolescents. However, immature teratomas are malignant. Most of the teratomas arise from extragonadal sites, especially midline and para-axial sites, producing tissues unrelated to the site of origin. It is also seen to be arising more commonly from the ovaries.[1]

Primarily teratomas are asymptomatic. They are mostly found incidentally, during clinical examination, imaging studies, or abdominal operations performed for a nonrelated indication.[2] Symptoms may arise due to their increasing size and vary according to the occupying organ, which may include abdominal pain, swelling, and abnormal organ function.[3] Bladder teratoma is a very rare extragonadal tumor, moreover so in adults. Bladder teratoma can have presentation ranging from irritative lower urinary tract symptoms to urinary retention. Pilimiction, the passage of hairs in the urine, is a rare but diagnostic presentation.

Primary urinary bladder germ cell tumors are exceedingly rare. We reviewed the literature and found that almost all of the reported cases of bladder teratoma have been in females. There are only around 3–4 cases of teratoma of the bladder reported in India, all of them in females.[1] The first case of urinary bladder teratoma from Asia was described by Misra *et al*., in 1997.[1] We present a case of a mature benign teratoma in a 22-year-old male presented with voiding symptoms and pilimiction. To our knowledge, ours is the first case of mature urinary bladder teratoma with a diagnostic presentation of "pilimiction," that too, in the male adolescent. Due to this unique combination of rare incidence with classical presentation, we hereby present this case.

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CASE REPORT

A 22-year-old Indian male is presented with chief complaints of increased frequency of micturition, burning micturition, graveluria, and passage of hair in the urine. There was no history of abdominal pain or hematuria. There was no significant history or any family history of malignancy. Physical examination was essentially normal. Clinical, routine blood analysis and urine analysis, as well as all other laboratory workups, were within the normal limits. Computed tomography (CT) scan showed a mass lesion in the bladder with calcification measuring 2.5 cm × 2 cm × 1.5 cm. The patient was hospitalized and planned for a cystoscopy. Cystoscopy showed a 3 cm × 3 cm sized whitish flat lesion with scattered areas of calcification and hair follicles on the right anterolateral wall [Figure 1]. Complete transurethral resection of the mass was done. The histological report confirmed it to be mature teratoma, a benign mature teratoma with ectodermal, mesodermal, and endodermal elements and confined to the bladder wall, with no extension outside [Figure 2]. The patient was discharged and planned for surgical excision. Right now, the patient is symptom-free and waiting to decide about the surgical excision.

DISCUSSION

Teratomas, also called dermoid cysts, are a controversial type of germ cell tumor containing all the three elements of the germ cell. The urinary bladder is not a usual site of origin for a teratoma.[1] The common age of presentation is a pediatric group and commonly sacrococcygeal or ovarian origin.[1] Pilimiction, the passage of hair in the urine, is a pathognomonic sign of urinary bladder teratoma.[2] The first case of urinary bladder teratoma from Asia was described by Misra *et al*., in 1997.[1] We have found only around four cases in India which were reported and cited in the literature till date.[1,4,5]

Urinary bladder teratomas usually contain hair and calcified material.[2] There may also be associated bladder diverticula and vesical stones.[3] On ultrasound imaging, a mature dermoid cyst appears as a thick-walled cystic mass with echogenic contents and calcification.[4] The preferred diagnostic investigation is CT scan as it more sensitively demonstrates fats with calcification.[4] In our case, the tumor was present on the right anterolateral wall and contained calcified material along with the hair. Histology confirmed skin and skin adnexal structures (sweat glands and hair follicles) in the specimen. This finding is important in that it enters the differential diagnosis of bladder mass, and the patient, as well as the surgeon, can be reassured since it is benign and will not need further treatment unless it is symptomatic.

The treatment of choice is transurethral resection of mass,[1] but surgical excision of the lesion with a 1 cm rim of normal bladder mucosa and bladder repair is the definitive treatment.[2-4] It can mimic bladder stone, clinically and radiologically. Whenever there is doubt, especially when the imaging findings suggest cystic/calcified mass confined to the bladder wall, teratoma of bladder should be considered in the differential diagnosis.

A bladder teratoma may have varied presentation ranging from voiding symptoms to mimicking as stones or simply as an incidental finding. Imaging studies may also fail to clear the dilemma. Although mature teratoma of the bladder is a rare incidence, one should keep this diagnosis in mind whenever in doubt. Pilimiction is a clinical symptom when used in combination with the radiological features of dermoid cyst, proves to be diagnostic. The treatment

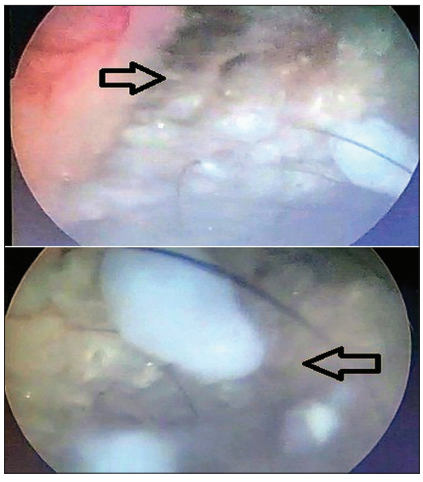

Figure 1: Cystoscopic image showing flat whitish lesion with hair follicles arising from the mass

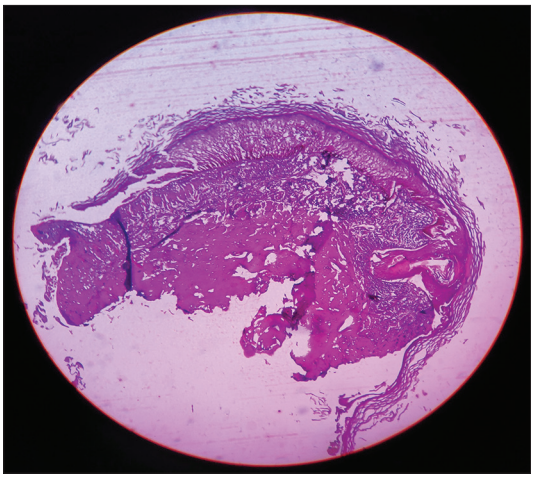

Figure 2: Histopathological slide showing hair follicle and stratified squamous epithelium with keratinization

is always surgical. We hope that through this case report, we were able to communicate about the rare and varied presentations of bladder teratoma and few important diagnostic pointers.

Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form the patient(s) has/have given his/her/their consent for his/her/their images and other clinical information to be reported in the journal. The patients understand that their names and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

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Conflicts of interest

There are no conflicts of interest.

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