

Epidermoid Cyst of the Urinary Bladder: A Rare Case

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INTRODUCTION

Epidermoid cyst of the urinary bladder is a very rare benign lesion. To the best of our knowledge, this case report of an epidermoid cyst located in the urinary bladder is the first in the English-language literature.

CASE REPORT

A 31-year-old man was admitted to the hospital for a lesion of the urinary bladder discovered on routine physical examination. He had a history of surgery for a perianal abscess 3 years earlier. The urinary Nuclear Matrix Protein 22 (NMP 22), serum cancer antigen 19-9 (CA 19-9) and carcinoembryonic antigen (CEA) levels were in the normal range. Ultrasonography (US) examination showed an avascular onion-ring pattern with alternating hyperechoic and hypoechoic rings. Computed tomography (CT) scan revealed a cystic mass in the right wall of the bladder that had a density of 15-30 Hounsfield Unit (HU) without enhancement (Figure 1). Surgical exploration revealed a 3.0 × 3.2 × 2.5 cm regularly shaped mass arising from the detrusor muscle layer of the bladder. The mass was excised completely. Upon incising of the mass, a large amount of cheesy keratinized material was found in the cavity. Hematoxylin and eosin staining of the specimen revealed a typical epidermoid cyst that was lined with stratified squamous epithelium. No hair, sebaceous glands or other skin adnexa were seen within the cyst, nor were there any findings suggestive of dysplasia or malignancy (Figure 2). The patient did well postoperatively, and no recurrence was noted at the 18-month follow-up.

DISCUSSION

Epidermoid cyst is lined with stratified squamous epithelium that contains a granular layer and is filled with keratinous material that is often in a laminated arrangement. These cysts are rare

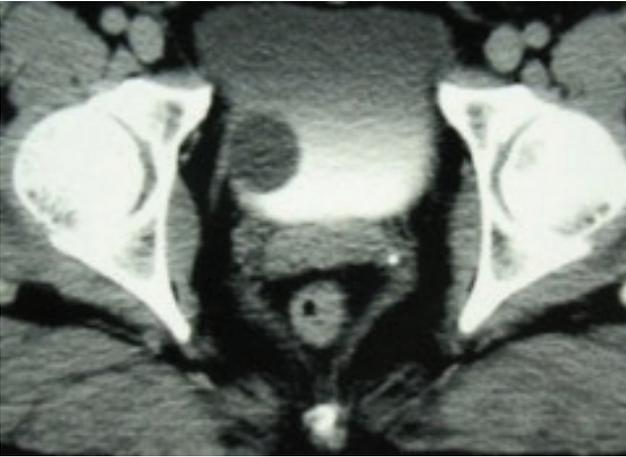


Figure 1. Computed tomography scan revealed a cystic mass in the right wall of the bladder that had a density of 15-30 Hounsfield Unit without enhancement.

in children but are common in adults, their most frequent locations are the face, scalp, neck, and trunk. Epidermoid cysts are rarely seen in solid organs. A few cases of epidermoid cysts located at rare sites such as the kidney and ureter have been reported in the literature.^(1,2) To the best of our knowledge, epidermoid cyst of the urinary bladder has not been reported previously.

Epidermoid cysts are usually asymptomatic, although symptoms may occur when the cysts are large. They may become infected, or uncommonly, they may rupture, causing a foreign body reaction. Symptoms of flank pain, dysuria, or gross hematuria are able to happen in patients with renal epidermoid cysts.⁽¹⁾ Results of routine laboratory tests are usually normal and not diagnostic. Keratinized material in a urine sample may suggest an epidermoid cyst in the urinary tract.⁽²⁾ Epidermoid cysts, which are true congenital primary mesothelial cysts, have an epithelial or mesothelial cell lining, and are thought to be developmental in origin. Different theories have been postulated for the presence of epidermoid cyst in extraordinary sites such as kidney, spleen, brain, and ureter. In the kidney, it is suggested that this type of cyst could originate from the embryonic remnant of Wolffian ducts.⁽²⁾ In this patient, the cyst may have arisen from surgical implantation of epidermal tissue secondary to perianal abscess surgery.

On US, the classic appearance is typically alternating of avascular hyperechoic and hypoechoic rings, which was described as an onion-ring pattern. On CT scan, epidermoid



Figure 2. Hematoxylin and eosin staining of the specimen revealed a typical epidermoid cyst that was lined with stratified squamous epithelium (40×10).

cysts appear as homogenous, well-defined, round or oval, low-enhancing or non-enhancing, hypodense lesions. Cysts should not demonstrate any enhancement after the administration of gadolinium.

Most epidermoid cysts don't cause problems or require treatment, but if they are a cosmetic concern, or if they rupture or become infected, they usually are removed surgically. Epidermoid cysts are usually benign, but there is a reported 1 to 3 percent rate of malignant transformation. Squamous cell carcinoma has been observed originating from squamous epithelium located in the testis, as well as from an intracranial epidermoid cyst.⁽³⁾ Although a lesion such as this has not been demonstrated in the urinary bladder, excision of this cyst is the most appropriate management.

Although rare, epidermoid cyst of the urinary bladder should be considered in the differential diagnosis of incidentally discovered bladder lesions.

CONFLICT OF INTEREST

None declared.

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