Perineal dermoid cyst in a young male

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ARTICLE INFO

Keywords:
Dermoid cyst
Perineal mass

ABSTRACT

Dermoid cysts, also known as mature cystic teratomas, are most frequently encountered in young women. While these lesions can be found throughout the body, they rarely involve the perineum. In order to better understand the clinical presentation, evaluation, and treatment of a perineal dermoid cyst, we present a 22-year-old male with a right buttock mass.

Introduction

Dermoid cysts are benign tumors consisting of keratinizing squamous cells and contain adnexal structures including hair follicles, sweat glands, and sebaceous glands. While pelvic dermoid cysts are common in females, they are exceedingly rare in male patients, especially when isolated to the perineum. We present the case of a 22 year-old male with a painful gluteal mass to better understand the evaluation, differential diagnosis and treatment of this rare pathology.

Case presentation

A 22-year-old male with a past medical history of anxiety, depression, and ADHD presented to his local urologist with an uncomfortable right buttock mass which had been slowly growing over the past year. The patient denied any voiding or ejaculatory complaints. Physical exam was notable for soft, palpable, non-tender mass at the right buttock tracking towards the patient’s perineum. Urinalysis was unremarkable and the patient’s renal function was at baseline with a creatinine of 1.0.

CT urogram demonstrated a 7.9 × 5.3 cm smoothly bordered cystic lesion in the medial aspect of the right thigh extending superiorly to the posterior aspect of the perineum abutting the urethra, without other abnormalities (Fig. 1). Flexible cystourethroscopy was performed which demonstrated a normal urethra, prostate, and bladder. A surgical excision via a perineal approach revealed a well-circumscribed mahogany mass extending toward the right gluteal region. The mass approached but was not associated with either the urethra or the rectum. The patient had an uneventful recovery and was discharged home from the post anesthesia care unit.

Discussion

Dermoid cysts, also known as mature cystic teratomas, are benign tumors commonly found at midline sites of embryonic fusion. They are commonly found in the female pelvis, but rarely reported in male patients. Dermoid cysts can be identified both on gross and microscopic pathology as they contain skin appendages, including hair follicles, sweat glands, and sebaceous glands. They are typically lined with stratified squamous epithelium and contain fluid with dense muddy and/or fatty components. Skin and subcutaneous involvement most often occur on the face, neck, or scalp. These lesions can also be found in the head, neck and in the peritoneal cavity. Dermoid cysts are typically slow growing and infrequently symptomatic. Ovarian dermoid cysts can lead to torsion or rupture with resultant peritonitis. Skin lesions are typically lined with stratified squamous epithelium and contain fluid with dense muddy and/or fatty components.

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Pelvic dermoid cysts are often identified incidentally on clinical
Ultrasound typically demonstrates a unilocular lesion with internal echoes secondary to mucoid or inflammatory debris. CT may demonstrate a well-circumscribed hypointense lesion with rare thin calcifications.

The differential diagnosis for similar appearing lesions on ultrasound and CT includes, Cowper’s duct cysts, epidermoid cysts, tailgut cysts, enteric cysts, and neurenteric cysts. An important point of clarification is the difference between epidermoid and dermoid cysts, the former being a simple dermal inclusion of stratified squamous epithelium that can often be found in the gluteal region, while the later includes adnexal structures related to embryonic remnants most often found in the midline. The aforementioned diagnoses are typically only made on pathological examination after surgical resection or biopsy, which allows for evaluation of the cyst lining, histological composition of its wall, and identification of aforementioned skin appendages. While these lesions are benign, malignant transformation, most commonly to squamous cell carcinoma, remains a possibility.

Conclusion

In summary, perineal dermoid cysts are a rare entity and usually discovered incidentally, either on physical exam or cross sectional imaging. While they do present the potential risk for infection and malignant transformation, these risks are low with complete surgical resection offering effective symptomatic relief with good long-term prognosis.

Section heading

Oddities.

Source of funding

This research did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors.

Declaration of competing interest

All authors declare no potential conflicts of interest.

Acknowledgements

None.

References

1. Dahan H, Arrive L, Wendam D, Docou le Pointe H, Djouhri H, Tubiana JM. Retrorectal developmental cysts in adult: clinical and radiologic-histopathologic review, differential diagnosis, and treatment. Radiographics. 2001;21(3):575-584. https://doi.org/10.1148/radiographics.21.3.g01ma13575.
2. Jao SW, Beart Jr RW, Spencer RJ, Reiman HM, Ilstrup DM. Retrorectal tumors. Mayo Clinic experience. Dis Colon Rectum. 1985 Sep;28(9):644-652. https://doi.org/10.1007/bf02553446, 1960-1979.
3. Chellamuthu S, Kakani N, Amarnath T, Rathinavel B. Large dermoid cyst in an adult male pelvis. Eurorad. 2012. Case 9950. Accessed https://www.eurorad.org/case/9950, Accessed May 5, 2020.
4. Munteanu I, Badulescu A, Mastalier B, Munteanu ML, Diaconu E, Popescu C. Retrorectal dermoid cyst: a rare clinical entity. Curr Health Sci J. 2013;39(3):179-183.
5. Woussen S, De Backer A, Banhoenacker F. Perineal dermoid cyst. Eurorad; 2015. Case 12843. Accessed https://www.eurorad.org/case/12843, Accessed May 5, 2020.