

Hemangioma of bladder with associated extravesical cyst in an 8-year old boy

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Abstract

Keywords

- hemangioma
- urinary bladder
- partial cystectomy

Urinary bladder hemangiomas are very rare and accounting for 0.6% of all urinary bladder tumors. An 8-year old boy presented with gross hematuria. After obtaining history and physical examination and imaging studies; transurethral resection biopsy reported hemangioma in association with an exteravesical cyst.

Background

Gross hematuria is relatively rare in children with approximately 1 in 1000 outpatient visits¹. The etiology is also very different than in adults, because urologic malignancies are less common in children. The major causes in children are glomerulopathy, urinary infection, hypercalciuria, kidney stone, congenital anomalies and trauma¹⁻⁴. Less common causes are malignancies, infantile polycystic kidney, hyperoxaluria and a significant number of cases have no etiology²⁻⁵. Considering the etiologies mentioned for children the role of urologist is limited, but sometimes radiographic modalities and cystoscopy are necessary for diagnosis⁶⁻⁷. Bladder hemangioma is a rare cause of hematuria which accounts for 0.6% of all urinary bladder tumors.

Case Presentation

An 8-year old boy presented with painless gross hematuria which had been going on for one week. He had a past history of the same problem 5 months ago. Physical examination revealed no unusual findings. Blood work-up was normal. Urinalysis showed many RBC and 10-20 WBC per HPF. Ultrasound of kidneys was normal but a 2.2×2.6 cm soft tissue mass was seen in the right side of the bladder dome which had a communication with a 1.9 ×1.5 cm extra luminal cystic lesion. CT scan of pelvis and abdomen with intravenous contrast also supported the above findings **Figure 1**. Cystoscopy demonstrated 2×2cm soft tissue reddish mass arising from the bladder dome and partial resection was performed by the transurethral root. Histopathologic examination of the specimen was reported as lymphangioma. Surgery was performed using a Pfannenstiel incision. The bladder was opened vertically **Figure 2**. The soft tissue mass with extravesical cyst was brought out en bloc **Figure 3**. Macroscopically the specimen was measured to be 5.5×3.6×3.5 cm; including a 2×2.5 solid tissue and 2×2 cm cystic lesion **Figure 4**. The pathologist reported hemangioma with epithelial cyst similar to simple peritoneal cyst **Figure 5**.

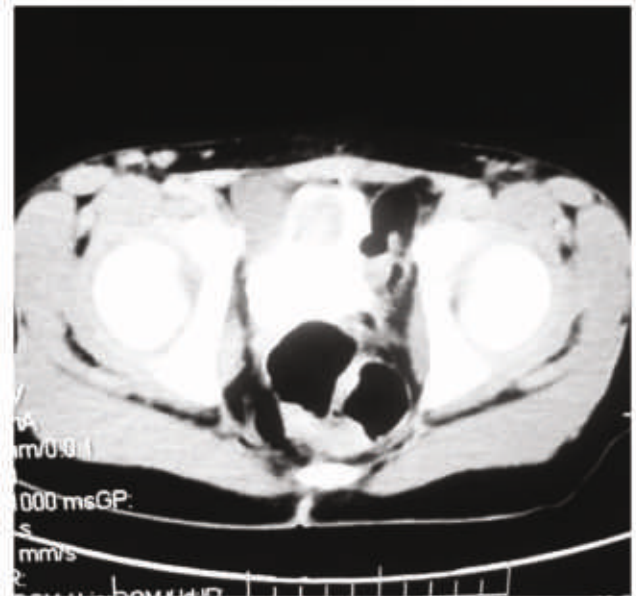


Figure 1: CT Scan image shows extravesical cyst associated with bladder mass

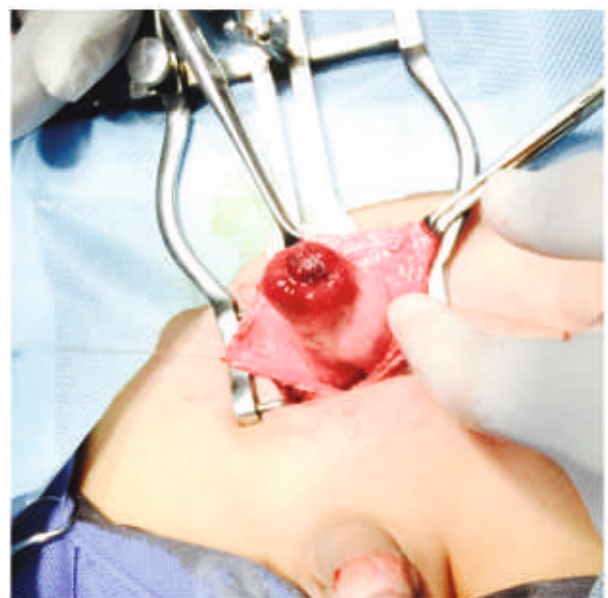


Figure 2: Intra operative image shows soft tissue mass with central ulcer due to previous TUR

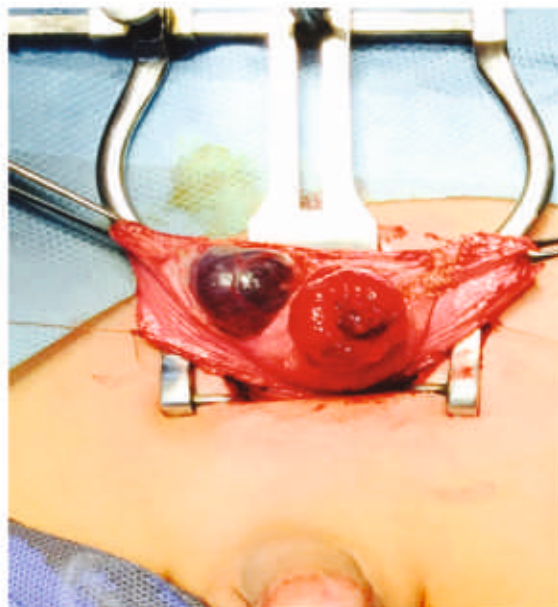


Figure 3: Intra operative image shows soft tissue mass with extravesical cyst

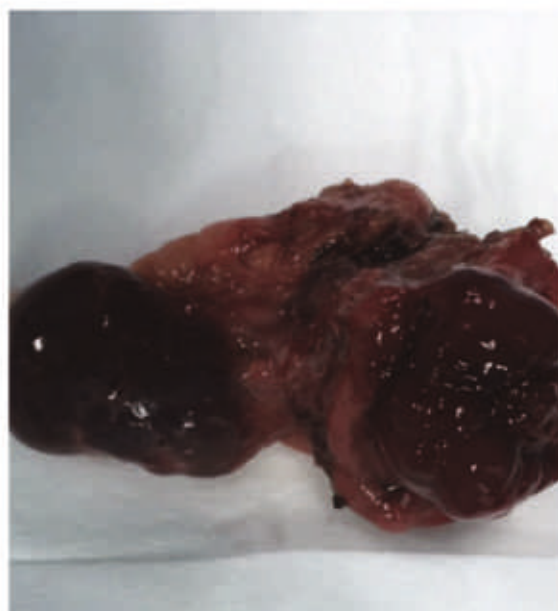


Figure 4: The specimen (mass and cyst)

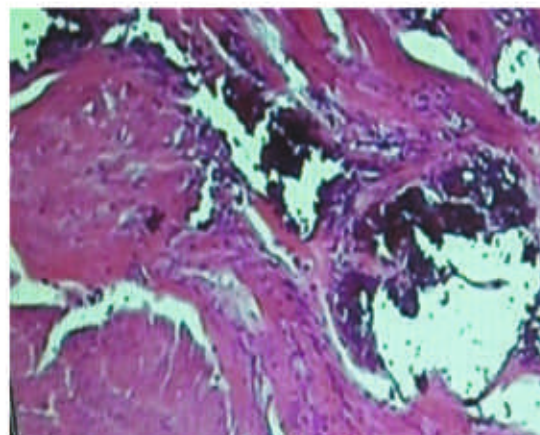


Figure 5: Histopathologic photograph

Discussion

Hemangioma is a benign and common mesenchymal tumor in different organs of the body but primary hemangioma of the bladder accounts for only 0.6% of vesical tumors^{8,9}. Bladder hemangioma presents mainly in pediatric patients but it manifests differently in each age group⁸. It has a male predominance¹⁰. Gross hematuria is the usual presenting symptom of this lesion¹¹. Often vesical hemangiomas are discovered in the dome of bladder and they are single, sessile blue masses smaller than 3 cm^{9,11}. Ultrasound, computed tomography scan and MR imaging are utilized for diagnostic work up in hematuria¹². All of these demonstrate bladder hemangioma as a sessile, solid hyper vascular tumors⁹. Cystoscopic appearance of a vesical hemangioma is a sessile, red-blue mass but this is not specific and differential diagnosis includes sarcoma, melanoma and endometriosis so biopsy is needed in order to verify the definitive diagnosis^{8,13}. Observation, radiotherapy, systemic steroids, transurethral resection, sclerosing agent injection and partial cystectomy are available treatment of hemangioma depending on the size and penetration degree of the lesion⁸. In this case, extravesical extension of the mass led to the decision of performing open surgery. To our knowledge, there are no reported cases of hemangioma in association with cyst of bladder.

Conclusion

One of the causes of hematuria is the bladder hemangioma especially in childhood which may have cystic and solid components. It should be kept in mind as a differential diagnosis in these cases.

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