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CASE REPORT: HEMANGIOMA OF THE URINARY BLADDER SHOWING VASCULAR INACTIVITY AND SPONTANEOUS REGRESSION

KEY WORDS

Bladder
Bladder neoplasms
Hemangioma
Vascular lesion

SUMMARY

Background: Bladder hemangioma is a rare benign vascular tumor occurring in any age group. It may occur singly or in association with systemic arteriovenous malformations.

Methods: We report a case of bladder hemangioma in a 35-year-old man who was admitted to our hospital for the evaluation of painless hematuria. Computerized tomography and MRI demonstrated bladder wall thickening with multiple foci of calcification in the vascular tumor.

Results: Immediately after biopsy and lesion fulguration, the hematuria disappeared. The specimen was pathologically diagnosed as cavernous hemangioma of the urinary bladder. To establish the extent of tumor pelvic angiography was performed and showed no vascular activity in tumor.

Conclusion: Lack of vascular activity on angiography and the calcifications of the tumor mass as seen on intravenous pyelography, computerised tomography and magnetic resonance suggested that it was partially or completely thrombosed and regressing, suggesting a conservative approach wherever possible. Spontaneous regression of such lesions has not been documented in the literature so far.

KLÍČOVÁ SLOVA

Močový měchýř
Novotvary močového měchýře
Hemangiom
Vaskulární léze

SOUHRN

KAZUISTIKA: HEMANGIOM MOČOVÉHO MĚCHÝŘE VYKAZUJÍCÍ VASKULÁRNÍ INAKTIVITU A SPONTÁNNÍ REGRESI

Úvod: Hemangiom močového měchýře je vzácný benigní cévní nádor vyskytující se ve všech věkových skupinách. Může se vyskytnout osamoceně nebo v souvislosti se systémovými arteriovenózními malformacemi.

Metody: Popisujeme případ hemangiomu močového měchýře u 35letého muže, který byl přijat do naší nemocnice k vyšetření nebolestivé hematurie. Počítačová tomografie a MRI prokázaly zesílení stěny močového měchýře s mnohočetnými kalcifikacemi ve vaskulárním nádoru.

Výsledky: Ihned po biopsii a fulguraci léze hematurie vymizela. Vzorek byl patologicky diagnostikován jako kavernózní hemangiom močového měchýře. Aby se zjistil rozsah nádoru, byla provedena angiografie pánve, která neprokázala žádnou vaskulární aktivitu v nádoru.

Závěr: Nepřítomnost vaskulární aktivity při angiografii a kalcifikace v mase nádoru pozorované při intravenózní pyelografii, počítačové tomografii a magnetické rezonanci předpokládají, že byl částečně nebo kompletně trombózován a regredoval, což předpokládá konzervativní postup, pokud je možný. Spontánní regrese takového nádoru dosud nebyla v literatuře popsána.

INTRODUCTION

Hemangiomas of the urinary bladder are a relatively unusual entity and are seldom described in the literature. They are of clinical importance in that they are one of benign causes of painless hematuria which may create problems concerning diagnosis and management. It may occur as an isolated lesion or in association with cutaneous or visceral arteriovenous malformations. Hemagioma of the urinary bladder is most likely congenital in origin, arising from embryonic angioblastic stem cells. In spite of it's benign nature and slow growth, recurrent hematuria persists if it remains untreated. To our knowledge, only isolated case reports

have appeared in the literature, and there is no information regarding the long term outcome of such patients. We report a rare case of bladder hemangioma showing vascular inactivity and spontaneous regression. In this case we offer more conservative therapy without bladder resection as an optional approach for treating such tumors that are partially thrombosed or calcificated and lacking vascular activity on angiography.

CASE REPORT

We report a case of bladder hemangioma in a 34-year-old man who referred to our clinic for the evaluation of gross painless hematuria. Reddish blue masses were seen cystoscopically at the posterior wall and the bladder dome. Intravenous pyelography (Fig.1) showed deformity of the bladder with a mass of calcifications overlaying the dome and without dilatation of the upper urinary tract. Computerized tomography (Fig.2) and magnetic resonance (Fig.3) imaging demonstrated bladder wall thickening, multiple foci of calcification in the vascular tumor overlaying the dome and measuring about 3 cm. Immediately after admission biopsy and transurethral fulguration of visible tumor masses were performed to stop the bleeding. Histological findings revealed cavernous hemangioma of the urinary bladder (Fig.4). To decide about definitive treatment and also to establish the extent of tumor we performed pelvic angiography (Fig.5). Lack of vascular activity on angiography and the calcifications of the mass as seen on intravenous pyelography, computerised tomography and magnetic resonance suggested that it was partially or completely thrombosed and regressing, so the potential danger of massive bleeding owing to rupture if left untreated has apparently passed. Postoperatively patient's hematuria stopped and after eleven months he is well.

DISCUSSION

Hemangioma of the bladder is an uncommon, benign vascular tumor. To our knowledge < 100 cases have been reported [1]. It comprises approximately 0.6 percent of primitive bladder tumors according to Melicow [2]. Hemangioma of the bladder occurs in all age groups and usually is observed in patients under the age of 30, with a slight male predominance [1]. The predominant clinical manifestation is recurrent, isolated hematuria. Other symptoms include suprapubic pain, vesical irritation and urinary retention. In the reviewed literature it varies from a few mm up to 10 cm in diameter. In most cases the tumors measure 1 to 2 cm and they are usually sessile, with a smooth or irregular surface and generally situated at the bladder dome, posterior wall and trigone of the bladder [1]. It may coexist with cutaneous hemangioma or be associated with the Sturge-Weber syndrome or the Klippel-Trenaunay-Weber sydrome [3,4]. The diagnosis of bladder hemangioma has been classically made by excretory urography, cystoscopy and cystography. The endoscopic differential diagnostic considerations include endometriosis, melanoma or sarcoma. Imaging studies such as pelvic angiography, scintigraphy, ultrasonography, computerised tomography and magnet resonance imaging are helpful in defining the extent of the tumor [5]. Their size is often underestimated owing to their extension into the submucosa of the bladder. Management of patients with hemangioma is controversial and should depend on their evolution, number and degree of penetration. Treatments vary from biopsy and fulguration, partial or complete cystectomy, sclerosing agent injec-

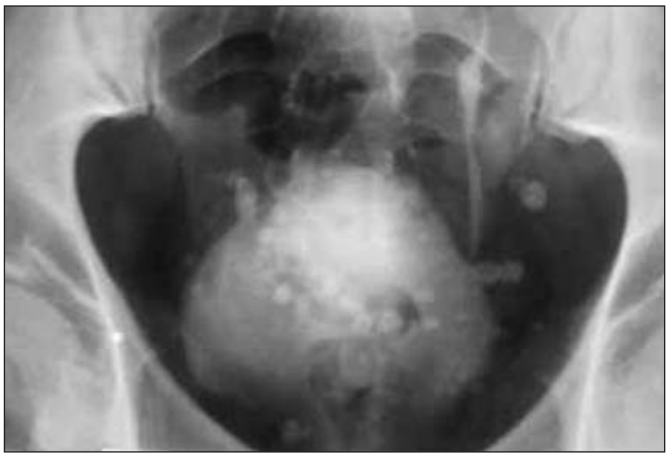

Fig. 1. Cystogram phase of IVP.

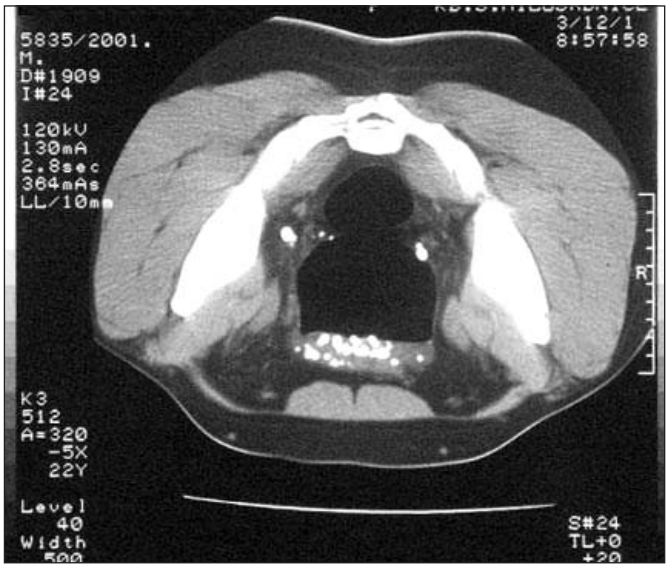

Fig. 2. Computerised tomography.

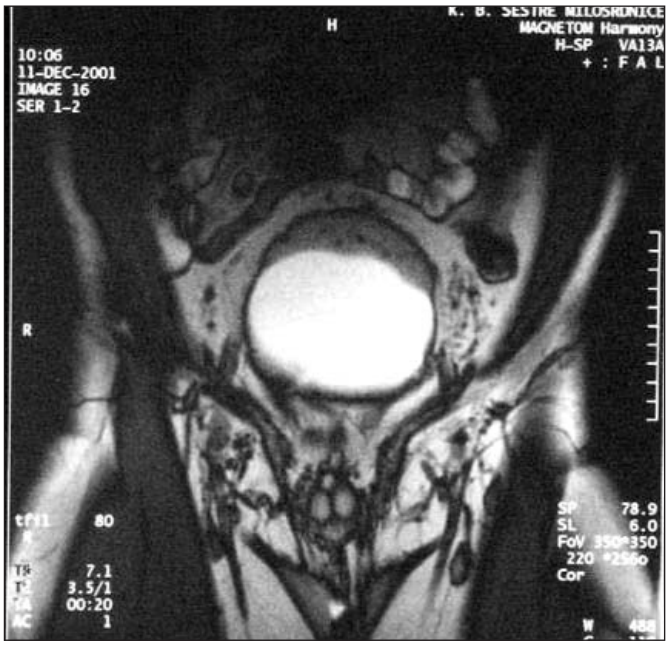

Fig. 3. Magnetic resonance.

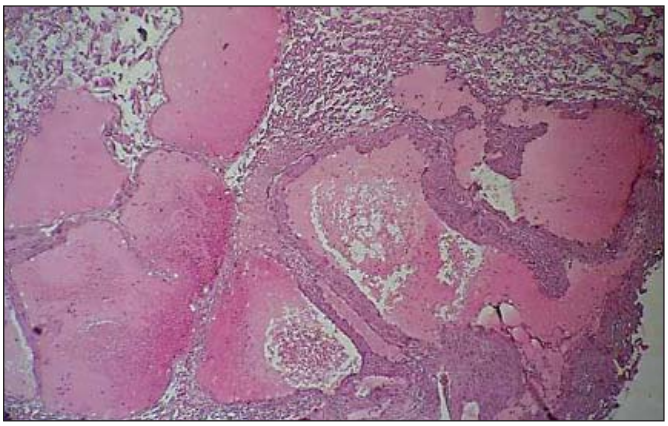

Fig. 4. Pathological specimen of cavernous hemangioma showing vascular spaces filled with red blood cells (H&E).

tion, irradiation, systemic steroids to use of the Nd-YAG laser [1]. As seen in our case, they can regress spontaneously as a result of thrombosis and fibrosclerosis, suggesting a more conservative approach wherever possible [6]. Asymptomatic and angiographically inactive hemangiomas do not require open surgery treatment [6]. We believe that more conservative treatment and follow-up should be considered for smaller tumors that show spontaneous regression and vascular inactivity.

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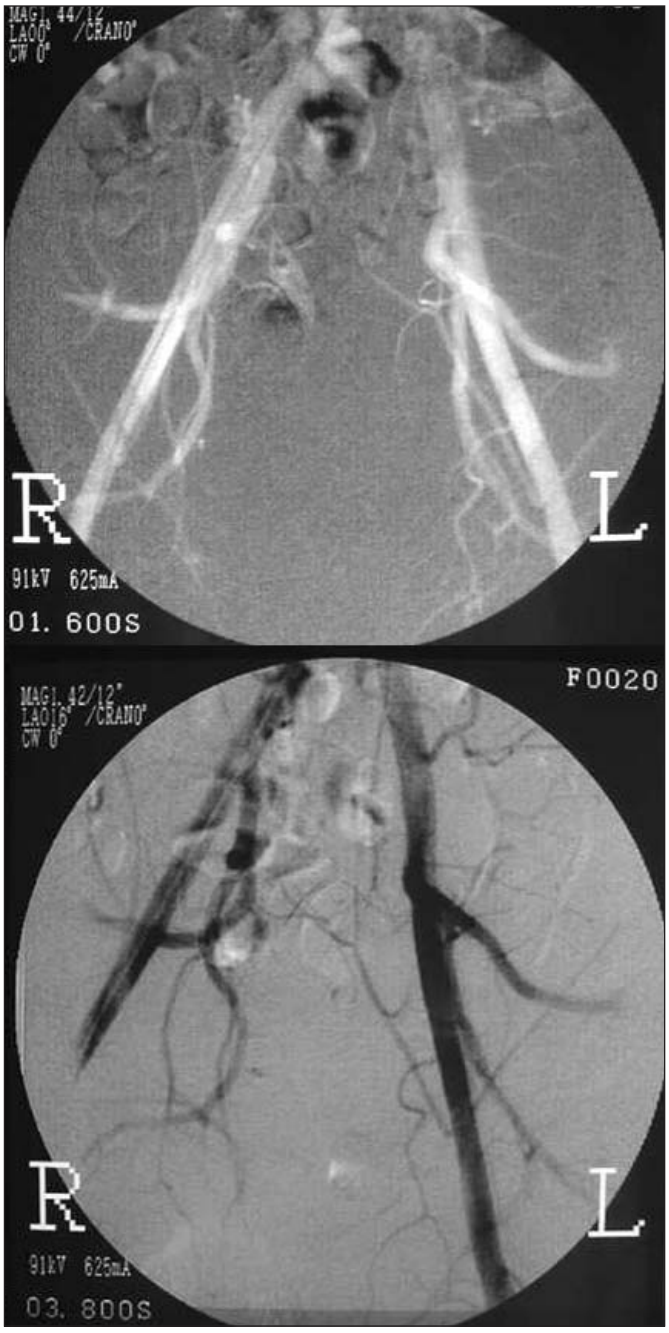

Fig. 5. Pelvic angiography showing lack of vascular activity in tumor.