

Actinomycosis of the Urinary Bladder

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Abstract

The case of a 49 year-old female patient, with frequency of urination for 2 years, having a mass at the anterior bladder wall and at the anterior abdominal wall is reported. Cystoscopy found an impression of the anterior bladder wall and hyperemic edematous bladder mucosa. Pre-operative computerized tomography suspected bladder tumor. Laparotomy revealed an inflammatory firm mass at the anterior bladder wall and another mass at the anterior abdominal wall. Partial cystectomy and excision of the mass at the anterior abdominal wall were performed. After the pathological examination confirmed actinomycosis, the patient was treated post operatively with penicillin. She recovered well.

Key word : Actinomycosis, Bladder Diseases, Bladder Neoplasms, Abdominal Wall Mass

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A 49-year-old woman presented at Udon-thani Hospital with a 2 year history of suprapubic pain, frequent micturition and dysuria. She had noted a non tender swelling lump at the right lower abdomen about 2 months before.

Examination revealed a slightly obese, pleasant woman. Her vital signs were within normal

limits. Palpation revealed an 8 cm in diameter abdominal wall mass in the right lower quadrant, firm but not tender. Blood examination showed $6,600 \text{ wbc}/\text{m}^3$ with 59 per cent polymorphonuclear leukocytes. Urinalysis showed 0-1 WBC and negative for RBC. Urine cultures failed to reveal pathogenic organisms. Ultrasound showed

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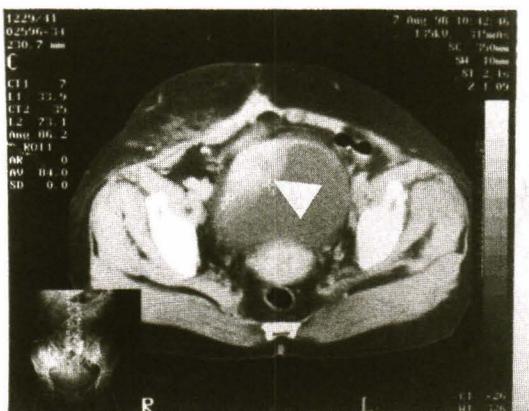


Fig. 1. CT scan of lower abdomen showing mass at anterior wall of bladder (arrow head).

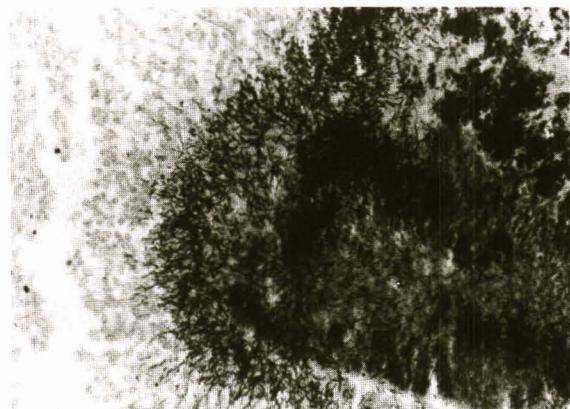


Fig. 2. Gram's stain (x 200): tissue from partial cystectomy : Delicate, branched, gram-positive filaments, 1 μ m in width, haphazardly arranged in an amorphous matrix of uncertain composition.

a mixed echoic mass at the anterior abdominal wall and at the anterior bladder wall. CT scan of the lower abdomen showed an anterior vesical mass about 5 cm diameter and an ill defined mass of about 6 cm at the anterior abdominal wall suspicious of a bladder tumor (Fig. 1). Cystoscopy showed impression with an area of edematous mucosa at the anterior bladder wall. Multiple biopsies obtained at cystoscopy revealed chronic inflammation.

Laparotomy revealed inflammation at the bladder dome with omentum, small bowel and sigmoid colon adhesion. The vesical mass was at the anterior and right lateral wall including the dome of the bladder. There was no tract connected between the vesical mass and abdominal wall mass demonstrated. Partial cystectomy was performed and the abdominal wall mass was excised in a separate incision. The pathology of both vesical and abdominal wall masses revealed several filamentous microorganisms suggestive of actinomycosis (Fig. 2).

Post operatively the patient was treated with intravenous penicillin G 18 million units/day for 2 weeks. The patient recovered well and was discharged with amoxycillin 2,000 mg/day orally for another 12 weeks. At follow-up 10 months

later the patient was symptom free and CT scan showed no evidence of relapse.

Comment

Actinomycosis is a gram positive branching bacteria which is normally present in the gastro-intestinal tract and is associated with ulcer, sinus and abscess formation and rarely systemic disease⁽¹⁾. There are three clinical types of actinomycosis : cervicofacial (the most common type), thoracic, and abdominal⁽²⁾. Human actinomycosis is caused mainly by *Actinomycosis israelii* (78 present)⁽³⁾. Actinomycosis of the urinary bladder is a rare condition. The disease presents with lower abdominal or rectal pain, urgency, recurrent cystitis⁽⁴⁾, abdominal mass or a fistula (ileovesical, appendicovesical or vesico-cutaneous)⁽⁵⁾. Radiological features are non specific. Most reports are of debilitated patients, post traumatic or in women with intrauterine devices⁽⁶⁾ but in our case there was no predisposing factor.

The clinical presentation of Actinomycosis is variable and non specific so less than 10 per cent of cases are diagnosed pre-operatively⁽⁶⁾. Actinomycosis should be considered in differential diagnosis of every bladder mass with

unusual aggression(4). In the present study, the patient had both a bladder wall and anterior abdominal wall mass but the tumors did not look as aggressive as they should be. Therefore, some granulomatous infection such as Tuberculosis, Botryomycosis and Actinomycosis was kept in mind. Pathological examination is an essential part for diagnosis. Cultures are often unsuccessful (7). Surgery combined with long term antibiotic remains a successful method of treatment. Most authors recommend penicillin, with tetracycline and erythromycin as alternatives. Penicillin G (10

to 20 million units per day for 2 to 6 weeks), followed by oral penicillin for 3 to 6 additional months is an accepted regimen in order to diminish the likelihood of relapse(3). In this study, if a precise diagnosis of the patient could have been made pre-operatively and the disease had responded to antibiotics alone, surgery may not have been required.

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ภาวะแอ็คติโนมัยโคสิสของกระเพาะปัสสาวะ

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ผู้ป่วยหญิงไทยอายุ 49 ปี มีอาการปัสสาวะบ่อยมา 2 ปี ตรวจพบมีก้อนที่ผนังด้านหน้าของกระเพาะปัสสาวะ และที่หน้าท้อง ส่องกล้องตรวจกระเพาะปัสสาวะ พบว่ามีนังกระเพาะปัสสาวะด้านหน้าถูกกดลงและมีลักษณะบวมแดง กว่าปกติ เอ็กซเรย์คอมพิวเตอร์พบก้อนที่หน้าท้องและกระเพาะปัสสาวะ ลงลึกเป็นเนื้องอกของกระเพาะปัสสาวะ ได้ทำการผ่าตัดพบก้อนที่ผนังด้านหน้าของกระเพาะปัสสาวะและผนังหน้าท้อง มีลักษณะของการอักเสบ ได้ตัดกระเพาะปัสสาวะ เจพะส่วนที่เป็นก้อนออก และตัดก้อนที่ผนังหน้าท้องออก ผลชันส์เนื้อพบว่าเป็นแอ็คติโนมัยโคสิสของกระเพาะปัสสาวะ หลังผ่าตัดผู้ป่วยได้รับยาปฏิชีวนะเพนิซิลลินต่อผู้ป่วยสามารถหายเป็นปกติ

คำสำคัญ : แอ็คติโนมัยโคสิส, โรคของกระเพาะปัสสาวะ, เนื้องอกของกระเพาะปัสสาวะ, ก้อนที่ผนังหน้าท้อง

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