

VESICAL GOSSYPIBOMA MIMICKING CALCULUS: A REPORT OF TWO CASES

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Retained surgical sponges (gossypiboma) are probably under-reported because of medico-legal implications. We report two cases of urinary bladder gossypiboma. The patients presented with persistent lower urinary tract symptoms following open prostatectomy. Ultrasonography and plain abdominal X-ray revealed calcified intra-vesical masses that were removed by open suprapubic cystotomy. Small gauze swabs should never be used during open prostatectomy. Gossypiboma should be considered in the differential diagnosis of patients with persistent bladder symptoms and intravesical calcification following open prostatectomy.

Key Words: gossypiboma, urinary bladder, calculus.

INTRODUCTION

Gossypiboma is an iatrogenic mass lesion resulting from retention of a surgical sponge. The word "gossypiboma" is derived from the Latin word gossypium, meaning cotton. This condition, which may occur in all surgical disciplines, is rarely reported, because of its medico-legal implications.¹ However, it is thought to occur more often than it is reported². Meticulous surgical techniques, swab counts and use of radio-opaque markers have not eliminated the complication³. Presentation is frequently obscure and diagnosis delayed, leading to significant morbidity⁴. Characteristic radiological features have been suggested to aid diagnosis⁵.

We herein report two cases of gossypiboma presenting as bladder stones following open prostatectomy.

CASE REPORTS

Case 1

R.A., a 72-year-old retired farmer, presented to our department with a history of painful micturition and occasional interruption

of the urinary stream. The symptoms had started in the immediate post-operative period following removal of the urethral catheter after open transvesical prostatectomy done at a general hospital two years before. Two weeks prior to presentation at our unit he had also noted the passage of some pieces of whitish thread per urethram. On examination, the patient had a midline suprapubic scar from the previous surgery; otherwise no abnormal physical findings were noted. The hemogram, urea and electrolytes were within normal limits and urine culture was negative. Ultrasonography showed two curvilinear echogenic structures 4.2 cm and 4.5 cm in diameter casting posterior acoustic shadows in the urinary bladder. At exploration, two calcified masses of gossypiboma were removed from the bladder. The postoperative period was uneventful.

Case 2

M.D., a 62-year-old retired civil servant, presented to our unit with a history of painful micturition and penile pain which had started two years earlier, a few weeks following open transvesical prostatectomy for benign

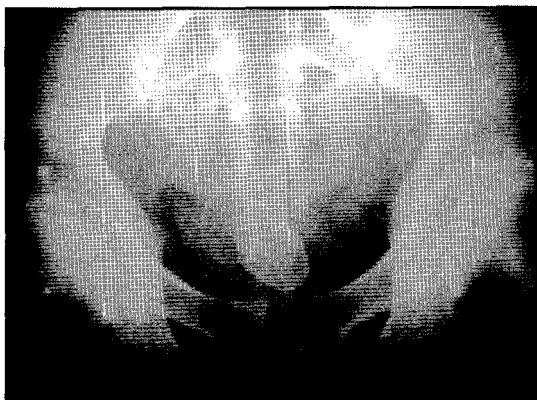


Fig. 1: Radiograph showing two pieces of calcified gossypiboma simulating bladder stones.

prostatic hyperplasia done at a general hospital. There was no history of passing any material per urethram. Abdominal examination revealed a midline suprapubic scar. On rectal examination nothing significant was found. The hemogram, urea and electrolytes were within normal limits and the urine culture was negative. Abdomino-pelvic ultrasound showed two crescentic intravesical echogenic structures of 30 mm and 18 mm in diameter. Plain radiography showed two rounded opacities in the pelvic region, one denser than the other; an appearance suggestive of bladder stones (Fig. 1). At open cystotomy, two globular masses of calcified gauze were found and removed (Fig. 2). The postoperative period was uneventful.

DISCUSSION

Gossypiboma is rarely encountered, but has been reported following various abdominal, thoracic, urologic, gynecologic and neurosurgical procedures³⁻⁶. Retained surgical sponge is thought to pathologically lead to two types of foreign body reactions: an exudative reaction leading to cysts and abscesses, or an aseptic fibrous response resulting in adhesion, encapsulation and granuloma⁷. In long-standing gossypibomas there is a gradual deposition of calcifications along the fibre network of the sponge⁸. In the urinary bladder this is liable to form a nidus for calcification, as with any foreign body in the urinary tract. Gossypiboma in the urinary bladder or pelvic region is an important

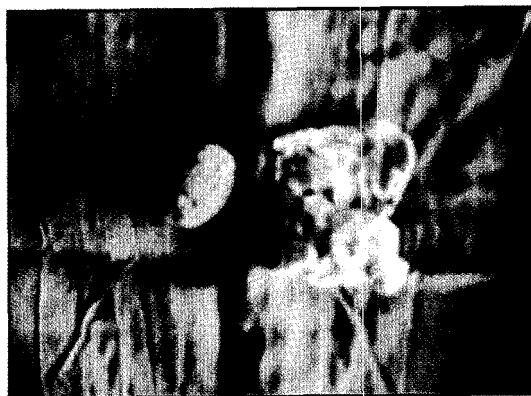


Fig. 2: Two pieces of calcified gossypiboma removed at bladder exploration, with one opened.

differential diagnosis of vesical calculus in any patient with previous open urologic surgery.

A gossypiboma may remain unnoticed for years until it gives rise to symptoms or until it is incidentally discovered⁹. The ultrasonographic finding is usually that of echogenic structures in the urinary bladder casting posterior acoustic shadows¹⁰. Plain abdominal radiography may show a rounded opacity in the pelvic region. Computerized tomography (CT) and magnetic resonance imaging (MRI) may reveal comprehensive details about the mass in most cases³⁻⁶, but these investigations are expensive and not always available. Once the diagnosis has been established, prompt operative intervention is recommended.

We recommend removal of calcified intravesical sponge through a suprapubic cystotomy. Cystoscopy will aid diagnosis, but cystoscopic extraction of a standard gossypiboma will risk severe urethral damage.

The presence of gossypiboma implies negligence by the operating team, which may have serious medico-legal implications¹. For this reason it is infrequently reported in the literature. The only reliable way of preventing this complication, is to never use small gauze swabs during prostatectomy. These swabs quickly become soaked with blood and are then impossible to see and very easy to miss on palpation, even with manual exploration of

the operative field. The only way to prevent a retained swab is by accurate counting, which is never fool-proof, especially with small swabs. The use of radio-opaque gauze will not prevent the problem, but may facilitate diagnosis, provided X-rays are taken after every operation, which is not desirable or cost-effective.

In conclusion, gossypiboma can be prevented. The use of small gauze swabs should be avoided at all costs. If they are used, various measures, including careful counting of surgical material, extensive exploration of the surgical site at the end of surgery, use of gauze impregnated with radio-opaque marker and postoperative radiological investigation in suspicious cases are mandatory. Where open prostatectomy is still practised, careful exploration of the bladder and prostatic fossa must be undertaken before wound closure. Gossypiboma should be taken into consideration as a differential diagnosis in patients with persistent symptoms and intravesical calcification following open prostatectomy.

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RESUME

GOSSYPIBOMA VESICAL IMITANT LE CALCUL : UN RAPPORT DE DEUX CAS

Des éponges chirurgicales maintenues (Gossypiboma) ne sont pas rapportées très souvent en raison des implications médico-légales. Nous rapportons deux cas de gossypiboma urinaire de vessie qui se sont présentés avec des symptômes persistants du bas appareil urinaire suivant une prostatectomie ouverte. L'ultrasonographie et la radiographie abdominale ont montré les masses intra-vesicales calcifiées qui ont été enlevées par cystotomie suspubienne. Pour éviter une telle complication, il ne faut jamais utiliser des tampons de gaze pendant une prostatectomie. Gossypiboma devrait être rappelée et considérée comme diagnostic différentiel chez les patients présentant des symptômes persistants et calcifications intravesicales suivant la prostatectomie ouverte.

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