

Other considerations for treating bladder tuberculosis

Dear Editor,

Regarding to the recently published manuscript about a case with genitourinary tuberculosis (GUTB) that successfully treated using robotic-assisted cystoplasty, we would like to summarize some considerations about such these cases.

Kidney can be a primary organ affected by tuberculosis in urinary tract and bladder affected as second organ while GUTB is the third most common form of extra-pulmonary tuberculosis.^[1] Delay in diagnosis may lead to raise incidence of complications such as destruction and fibrosis of the urinary bladder. Bladder perforation is one of the cystitis complications, but we had seen more in some vulnerable people such as diabetic cases.^[2] Bladder TB lesions could affect its function such away: 1-decrease capacity of bladder, 2-bladder contracture and lost its capacity and has little or no value for a urinary reservoir.

Impairment in bladder capacity induces some symptoms like frequency, nocturia, urgency, abdominal pain, and hematuria. These complications oblige surgeons for bladder augmentation. Moreover, surgeons should pay attention to long-term complications of GUTB such as urinary stone and electrolyte disorders.^[3]

Augmentation method for urinary bladder reconstruction can achieve from some part of GI such as stomach, ileum, and colon. Augmentation cystoscopy may have complication

for patients such as bladder perforation, and it will help to spread of infection in peritoneal space; nevertheless, perforation after surgery should be more attention. Before any operation on patients, spontaneous vesicle rupture secondary to bacterial cystitis in elderly patients may be accrued.^[4] Also, surgeons should have a valid method to overruled TB infection in selected part of GI for augmentation.

Genitourinary tuberculosis may appear gross hematuria, which is similar to augmentation suture failure.^[5] The tissue used in the procedure can be a source of many complications including abscess formation, enteric fistulas, bowel obstruction, and low fat-soluble vitamins when stomach used for implantation, and maintain diarrhea when colon transfer in procedure. Also, it could have many disorders for urinary tract such as infection and renal impairment, blunting of the calyces, and papillary necrosis, urethra ulcers and after period of time cause for urethra necrosis due to narrow urethra.^[4] Late surgical complications such as upper tract obstruction and perforation of the augmented bladder could make problem for patients. There are some method for genitourinary TB repair, but evidence showed that Robot-assisted laparoscopic operation is method without risk of hand-shaking of surgeons, high-resolution, and had low risk for post-operation complication.^[6] Overall, due to low complications, device-assisted surgery such as robot-assisted laparoscopic and ureteroscopic procedures are better to use for initial evaluation before surgery in high-risk patients with huge bladder lesions.

Amin Saburi¹, Mahdi Safiabady²

Chemical Injuries Research Center, Baqiyatallah University of Medical Sciences, Tehran, & ¹Atherosclerosis and Coronary Artery Research Centre, Birjand University of Medical Sciences, Birjand, Iran ²Student Research Committee, Baqiyatallah University of Medical Sciences, Tehran, Iran

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Address for correspondence:

Dr. Amin Saburi,
Chemical Injuries Research Center, Baqiyatallah University of Medical
Sciences, Mollasadra St, Vanak Sq, Tehran, & Atherosclerosis and Coronary
Artery Research Centre, Birjand University of Medical Sciences,
Birjand, Iran.
E-mail: aminsaburi@yahoo.com

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