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debridement can be performed safely, while successfully treating the devastating sequela of pubic bone osteomyelitis. This is an important addition to the surgical literature in the era of robotic surgery, as it provides a minimally invasive option of managing pubic bone osteomyelitis. While opening the abdomen is always an option, there is certainly less morbidity associated with treating this robotically, with potentially less resection of otherwise healthy bone.

This is a heterogeneous group of patients with varying degrees of pubic bone pathology. Intraoperative judgment is an important factor in managing this crippling disease, but incredibly difficult due to how infrequently it is encountered. In this series, 16.7% of patient had recurrence of osteomyelitis, and one wonders whether this may have been avoided with either a more extensive bone debridement or use of an interposition flap (ie, omentum or rectus abdominis muscle). Based on this study, minimally invasive surgeons have a new technique to manage pubic bone osteomyelitis, but should not be hesitant to perform a more extensive bone resection or use an interposition flap in more extensive cases of osteomyelitis.

Alex J. Vanni, Center for Reconstructive Urologic Surgery, Lahey Hospital and Medical Center, Burlington, MA

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EDITORIAL COMMENT

I congratulate the authors for presenting a minimally invasive approach to pubic symphyseal debridement with or without cystectomy in patients with urosymphiseal fistulas (USFs). Although a rare complication of prostate cancer radiotherapy treatment, USF and its associated osteomyelitis frequently result in debilitating pain, sepsis, decreased quality of life, and potentially increased mortality. The traditional treatment of this difficult problem has been to perform an open pubic bone debridement with either cystectomy and ileal conduit if the bladder is not salvageable, or to perform a USF closure with rectus muscle flap in the rare case of a salvageable lower urinary tract.^{1–3}

The current study suggests that robot-assisted cystectomy and urinary diversion with concomitant holmium laser pubic bone

AUTHOR REPLY

We really appreciate the editorial feedback. This is a novel minimally invasive approach to a very complex problem. We agree that this pathology is extremely rare and requires aggressive treatment in order to definitively treat.

It is unknown if a more extensive debridement provides further advantage to excision and debridement of the specific fistulous tract, immediate surrounding area and diversion of urine with perioperative antibiotics. In our experience, we have found our orthopedic colleagues prefer the minimally invasive approach as it allows for maintenance of pelvic bone stability in addition to targeting the specific diseased area.

Regarding commentary about a 16.7% recurrence rate, only 1 patient had a true recurrence of osteomyelitis despite urinary diversion. The other patient had complications of colonic fistula as a result of their prior radiotherapy which resulted in osteomyelitis 13 months after their urinary diversion and pubic bone debridement surgery. Overall the recurrence rate from urinary tract was 8.3% which is consistent with the prior literature on this topic.

There are cases that may at times need more extensive bone debridement. The approach taken should be a decision made in conjunction with orthopedic surgeons. Overall, pubic bone osteomyelitis from urinary fistula is extremely difficult to treat following urinary diversion and debridement; and can take multiple courses of culture-specific antibiotics due to the polymicrobial nature of these infections.

Anojan Navaratnam, Mayo Clinic in Arizona, Department of Urology, Phoenix, AZ; Royal Brisbane and Women's Hospital, Department of Urology, Herston, Queensland, Australia; Brisbane Urology Clinic, Brisbane, Queensland, Australia

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