COMMENTARY

Do antibiotics cause AUS infections?

Jack M. Zuckerman, MD

Department of Urology, Naval Medical Center Portsmouth, Portsmouth, Virginia, USA *Referring to the article published on pp.* 10437-10442 *in this issue*

ZUCKERMAN JM. Do antibiotics cause AUS infections? *Can J Urol* 2020;27(6):10443.

The authors of this manuscript are applauded in their attempt to answer a very challenging question in urologic prosthetic surgery: do prolonged antibiotics lead to improved outcomes? They performed a retrospective review of 155 men who underwent insertion of an artificial urinary sphincter (AUS) for stress urinary incontinence at a single institution. Patients were then stratified based on whether or not they received antibiotics for longer than 24 hours as well as whether they had risk factors for postoperative complications, such as diabetes, history of radiation and prior AUS placement. In their series, the used of prolonged postoperative antibiotics did not reduce the incidence of postoperative infections or other complications. In fact, there was a non-significantly higher number of patients in the antibiotic use group with device infections (6%) or erosions (8%).¹

This retrospective data set is limited in that there was a higher proportion of men with radiation and redo procedures in the prolonged antibiotics with risk factors group (Group 3). Although these risk factors are not consistently noted in large series to be independent predictors for AUS complications, it is generally felt that these patients are at increased risk for postoperative problems.²⁻⁵ So it is not entirely surprising that Group 3 in this series trends towards

higher rates of infection or explantation and it is unlikely that the use of antibiotics was the cause of this trend. However, as these authors discuss, it is more likely that the antibiotics are simply not able to alter natural history of these complications in at risk patients and therefore every effort should be made not to extend coverage past 24 hours, consistent with society recommendations. While this article adds to the body of work suggesting we limit our use of postoperative antibiotics in prosthetic surgery, it also continues to highlight the need for a prospective randomized controlled trial to answer the question for us definitively.

References

- 1. Dropkin BM, Dallmer JD, Chisholm LP et al. Are postoperative antibiotics necessary after artificial urinary sphincter insertion? *Can J Urol* 2020;27(6):10437-10442.
- 2. Lai HH, Hsu EI, Teh BS, Butler EB, Boone TB. 13 years of experience with artificial urinary sphincter implantation at Baylor College of Medicine. *J Urol* 2007;177(3):1021-1025.
- 3. Kim SP, Sarmast Z, Daignault S, Faerber GJ, McGuire EJ, Latini JM. Long-term durability and functional outcomes among patients with artificial urinary sphincters: a 10-year retrospective review from the University of Michigan. *J Urol* 2008;179(5): 1912-1916.
- Kaufman MR, Milam DF, Johnsen NV et al. Prior radiation therapy decreases time to idiopathic erosion of artificial urinary sphincter: a multi-institutional analysis. *J Urol* 2018;199(4): 1037-1041.
- Cheung F, Fathollahi A, Vertosick E, Jarvis TR, Katz D, Sandhu JS. Dorsolateral fibromuscular tissue preservation during artificial urinary sphincter cuff placement is associated with low infection and erosion rates. *BJU Int* 2019;123(2):328-334.

Address correspondence to Dr. Jack M. Zuckerman, Department of Urology, Naval Medical Center Portsmouth, 620 John Paul Jones Circle, Portsmouth, VA 23708-2197 USA