

UCSF

UC San Francisco Previously Published Works

Title

Editorial Comment

Permalink

<https://escholarship.org/uc/item/70f9045c>

Journal

Urology, 82(4)

ISSN

0090-4295

Author

Breyer, Benjamin N

Publication Date

2013-10-01

DOI

10.1016/j.urology.2013.05.053

Peer reviewed

13. Bode LG, Kluytmans JA, Wertheim HF, et al. Preventing surgical-site infections in nasal carriers of *Staphylococcus aureus*. *N Engl J Med.* 2010;362:9-17.
14. Magera JS, Inman BA, Elliott DS. Does preoperative topical antimicrobial scrub reduce positive surgical site culture rates in men undergoing artificial urinary sphincter placement? *J Urol.* 2007;178:1328-1332.
15. Weber WP, Reck S, Neff U, et al. Surgical hand antisepsis with alcohol-based hand rub: comparison of effectiveness after 1.5 and 3 minutes of application. *Infect Control Hosp Epidemiol.* 2009;30:420-426.
16. Carson CC III, Mulcahy JJ, Harsch MR. Long-term infection outcomes after original antibiotic impregnated inflatable penile prosthesis implants: up to 7.7 years of followup. *J Urol.* 2011;185:614-618.
17. Serefoglu EC, Mandava SH, Gokce A, et al. Long-term revision rate due to infection in hydrophilic-coated inflatable penile prostheses: 11-year follow-up. *J Sex Med.* 2012;9:2182-2186.
18. Mulcahy JJ, Carson CC III. Long-term infection rates in diabetic patients implanted with antibiotic-impregnated versus non-impregnated inflatable penile prostheses: 7-year outcomes. *Eur Urol.* 2011;60:167-172.
19. Abouassaly R, Angermeier KW, Montague DK. Risk of infection with an antibiotic coated penile prosthesis at device replacement for mechanical failure. *J Urol.* 2006;176:2471-2473.
20. Eid JF, Wilson SK, Cleves M, et al. Coated implants and "no touch" surgical technique decreases risk of infection in inflatable penile prosthesis implantation to 0.46%. *Urology.* 2012;79:1310-1315.
21. Mandava SH, Serefoglu EC, Freier MT, et al. Infection retardant coated inflatable penile prostheses decrease the incidence of infection: a systematic review and meta-analysis. *J Urol.* 2012;188:1855-1860.
22. Swords K, Martinez DR, Lockhart JL, et al. A preliminary report on the usage of an intracorporal antibiotic cast with synthetic high purity CaSO₄ for the treatment of infected penile implant. *J Sex Med.* 2013;10:1162-1169.
23. Mulcahy JJ. Long-term experience with salvage of infected penile implants. *J Urol.* 2000;163:481-482.
24. Bryan DE, Mulcahy JJ, Simmons GR. Salvage procedure for infected noneroded artificial urinary sphincters. *J Urol.* 2002;168:2464-2466.
25. Henry GD, Carson CC, Wilson SK, et al. Revision washout decreases implant capsule tissue culture positivity: a multicenter study. *J Urol.* 2008;179:186-190.
26. Silverstein AD, Henry GD, Evans B, et al. Biofilm formation on clinically noninfected penile prostheses. *J Urol.* 2006;176:1008-1011.
27. Henry GD, Donatucci CF, Conners W, et al. An outcome analysis of over 200 revision surgeries for penile prosthesis implantation: a multicenter study. *J Sex Med.* 2012;9:309-315.
28. Bartley J, Zimmerman WB, Dhabuwala CB. Inflatable penile prosthesis and salvage protocol for mechanical failure: is it really necessary? *J Sex Med.* 2012;9:2175-2181.
29. Darouiche RO. Antimicrobial approaches for preventing infections associated with surgical implants. *Clin Infect Dis.* 2003;36:1284-1289.
30. Mangram AJ, Horan TC, Pearson ML, et al. Guideline for prevention of surgical site infection, 1999: Hospital Infection Control Practices Advisory Committee. *Infect Control Hosp Epidemiol.* 1999;20:250-278.

EDITORIAL COMMENT

This consensus statement will be a valuable reference for the penile prosthetic implanter to consult to prevent and manage

penile prosthesis infection. The authors are made up of leaders in sexual medicine and an authority in infectious disease. With up to 25,000 patients undergoing penile prosthesis implantation and an expected infection rate of 2%-3%, or higher in complex cases, managing infection is a considerable challenge, and we are best served by avoiding it altogether when possible.^{1,2} The fact that the authors did not assign levels of evidence to their recommendations speaks to the quality of the available evidence. In most cases, expert opinion is the best guidance we have. The authors point out methodological challenges of performing randomized trials with limited case numbers and a relatively rare outcome.

All urologists whether they implant prosthetics should be concerned about the epidemic of antibiotic resistance and the paucity of new antimicrobial drugs in development. Fewer new antimicrobials are being delivered to the market place. Between 1962 (nalidixic acid) and 2000 (linezolid) no new classes of antimicrobials were developed; drugs that entered the market place during this time were simply modifications of available molecules.³ Most large pharmaceutical companies no longer invest in antimicrobial research and development, given the long lead time to market place (up to 20 years), the cost (\$1 billion), and a market potentially limited by regulatory constraints.

The Health and Human Services Department of the United States is providing \$40 million to drug maker GlaxoSmithKline to help develop agents that will combat antibiotic resistance or those used for bioterrorism.⁴ The government program could give up to \$200 million over the next 5 years to the company. A similar program in Europe is underway with AstraZeneca and GlaxoSmithKline with companies working together to pool resources and research data. In addition, creating a stream-lined, faster drug approval process similar to those used for orphan drugs to treat rare conditions is being considered for antimicrobials. Finally, tighter regulation of distribution and marketing will be needed to protect these new antimicrobials from overuse and the development of resistance. Urologists will want to monitor the landscape of antimicrobial development and resistance closely as this dilemma evolves.

Benjamin N. Breyer, M.D., M.A.S., Department of Urology, University of California, San Francisco, San Francisco, CA

References

1. Darouiche RO. Treatment of infections associated with surgical implants. *N Engl J Med.* 2004;350:1422-1429.
2. Wilson SK, Zumbe J, Henry GD, et al. Infection reduction inflatable penile prosthesis. *Urology.* 2007;70:337-340.
3. Rai J, Randhawa GK, Kaur M. Recent advances in antibacterial drugs. *Int J Appl Basic Med Res.* 2013;3:3-10.
4. Barry Meier. Pressure Grows to Create Drugs for "Superbugs." *New York Times.* June 2, 2013. Available at: http://www.nytimes.com/2013/06/03/health/experts-debate-plan-to-speed-antibiotic-development.html?pagewanted=all&_r=0. Accessed June 25, 2013.

<http://dx.doi.org/10.1016/j.urology.2013.05.053>
UROLOGY 82: 942, 2013. Published by Elsevier Inc.