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(165) NOVEL INSIGHTS ON PERIOPERATIVE ANTIMICROBIAL PROPHYLAXIS PATTERNS FOR INFLATABLE PENILE PROSTHESIS: FINDINGS FROM A LARGE MULTINATIONAL COLLABORATIVE M.A.M. Hammad¹, B. Azad¹, M.S. Gross², D. Swerdloff³, I. Miller¹, E. Abou Chawareb¹, R. Andrianne⁴, A.L. Burnett⁵, K. Gross⁶, G. Hatzichristodoulou⁷, A. Lentz⁸, D. Osmonov⁹, A. Jones¹⁰, V. Modgil¹⁰, P. Perito¹¹, J.M. Hotaling⁶, S.H. Park¹², I. Pearce¹⁰, H. Sadeghi-Nejad¹³, M. Sempels⁴, A. Suarez-Sarmiento Jr.¹¹, K. Van Renterghem¹⁴, J.N. Warner¹⁵, M. Ziegelmann¹⁵, T.C. Hsieh¹⁶, L. Jenkins¹, J. Jones², J. Simhan³, F.A. Yafi¹, on behalf of the PUMP (Prosthetic Urology Multi-institutional Partnership) collaborators D.W. Barham¹⁷ ¹Department of Urology, University of California, Irvine, Orange, CA, United States ²Section of Urology, Dartmouth-Hitchcock Medical Center, Lebanon, NH, United States ³Department of Urology/Urologic Oncology, Fox Chase Cancer Center, Philadelphia, PA, United States ⁴Department of Urology, University Hospital of Liege, Liege, Belgium ⁵Department of Urology, Johns Hopkins University, Baltimore, MD, United States ⁶Division of Urology, Department of Surgery, University of Utah, Salt Lake City, UT, United States ⁷Department of Urology, 'Martha-Maria' Hospital Nuremberg, Nuremberg, Germany ⁸Department of Urology, Duke University, Durham, NC, United States ⁹Department of Urology, University Hospital Schleswig Holstein, Kiel, Germany ¹⁰Manchester Andrology Centre, Manchester University NHS Foundation Trust, Manchester, United Kingdom ¹¹Perito Urology, Coral Gables, FL, United States ¹²Sewum Prosthetic Urology Center of Excellence, Seoul, South Korea ¹³Department of Urology, New York University School of Medicine, New York, NY, United States ¹⁴Department of Urology, Jessa Hospital, Hasselt, Belgium ¹⁵Department of Urology, Mayo Clinic, Rochester, Minnesota, United States ¹⁶Department of Urology, University of California, San Diego, La Jolla, CA, United States ¹⁷Department of Surgery, Urology Section, Brooke Army Medical Center, San Antonio, TX, United States.

Introduction: Inflatable penile prosthesis (IPP) surgery is a well-established treatment for erectile dysfunction (ED). There is little information in the literature regarding the utilization of perioperative antimicrobial prophylaxis in primary and revision IPP surgeries.

Objective: We investigated the patterns of perioperative antimicrobial prophylaxis among a large multinational cohort of primary and revision IPP surgeries.

Methods: We conducted a retrospective analysis of 5,400 patients (4,187 primary IPP patients and 849 revision IPP patients) from our Prosthetic Urology Multi-Institutional Partnership (PUMP) institutions. Usage data for intravenous

(IV), preoperative oral, and postoperative oral antimicrobials were analyzed. We specifically assessed patient profiles, antimicrobial selection, and antimicrobial duration. Multivariate statistical analyses were conducted to identify significant variations between primary and revision surgeries.

Results: For patients undergoing primary IPP placement, 81.9% received IV antibiotics for <24 hours whereas 18.1% received IV antibiotics for >24 hours. Preoperative oral antimicrobials were used in 59.4% of patients and 99.4% received postoperative oral antimicrobials. The overall infection rate for primary implants was 2%. Notably, quinolone administration shows a higher postoperative infection rate (11.4%) compared to gentamicin (1.9%), cephalosporin (0%), and vancomycin (1.0%). Multivariable regression analysis identifies factors such as a history of infection, diabetes, and priapism as predictors for postoperative infections. Furthermore, the study finds that perioperative antifungal use is associated with a decreased risk of infection.

Conclusions: This study provides valuable insights into the patterns of perioperative antimicrobial prophylaxis. Duration, type, and route of antibiotics given preoperatively or postoperatively do not affect postoperative infection rates among high volume prosthetic urologists. Giving IV antibiotics for more than 24 hours does not affect postoperative infection. Perioperative antifungals are a protective factor.

Disclosure: Any of the authors act as a consultant, employee or shareholder of an industry for: Coloplast, Clarus Therapeutics, Antares Pharma, Acerus.

Perioperative IV Antibiotics:					
	No Infection	Postop Infection			
	Count (%)	Count (%)	P-value		
Gentamicin	32 (0.6)	2 (1.9)	0.096		
Quinolone	247 (4.7)	12 (11.4)	0.001		
Cephalosporin	36 (0.7)	0 (0.0)	0.396		
Vancomycin	11 (0.2)	1 (1.0)	0.110		
Gentamicin + Vancomycin	3088 (58.5)	63 (60.0)	0.764		
Other Combinations	1703 (32.3)	25 (23.8)	0.066		

Multivariable Regression			
	Positive	P-value	
History of IPP Infection	6.333 [3.58-11.22]	<0.001	
Diabetes	1.579 [1.03-2.43]	0.038	
History of Priapism	1.831 [0.81-4.16]	0.149	

Multivariable Regression				
	Positive	P-value		
Quinolone	1.460 [0.72-2.97]	0.296		
Pre-op PO Antibiotics	1.222 [0.62-2.42]	0.564		
IV Antibiotics (>24 hrs)	0.533 [0.13-2.27]	0.395		
Peri-op Antifungals	0.298 [0.15-0.59]	<0.001		