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1. Introduction

- Coloplast Titan penile prostheses (PP) allow antimicrobial dips to be specially selected by the surgeon implanter, however the best choice is widely debated and remains a surgeon's preference.
- The present study seeks to compare post-operative outcomes based on the antimicrobial solutions used for dipping in diabetic patients undergoing primary Coloplast Titan PP implantation.

2. Methods

- Retrospective chart review of 473 diabetic patients undergoing primary Coloplast Titan PP placement from April 2003 to May 2018 across 18 institutions
- Variables of interest were antibiotic and antifungal dips used for device impregnation.
- Primary outcome measure was post-operative infection rates and secondary outcome measures were revision and explantation rates.
- Univariate comparisons of proportions were completed for rates of infection, explantation, and revision based on different antimicrobial regimens used.

3. Results

- Overall, 468 patients had complete information and were included in the study.
- The total number of infections, explantations, and revisions were 15 (3.3%), 18 (4.0%), and 27 (6.0%), respectively.
- Vancomycin + Gentamicin dipping solution was used in 276 devices, Gentamicin + a different antibiotic solution was used in 177 devices, of which 143 were dipped in Rifampin + Gentamicin, and 190 devices were dipped in an antifungal (Amphotericin).

Table 1. Impact of Antibiotic Dipping Solution on Post-Operative Infection

Antibiotic Regimen	N	# Infections	% Infections	P-value (Inf)
Rifampin + Gentamicin	143	8	5.6%	0.014*
Vancomycin + Gentamicin	276	4	1.4%	
Vancomycin + Gentamicin	276	4	1.4%	0.005*
Other + Gentamicin	177	11	6.2%	
Rifampin Use	158	9	5.7%	0.057
No Rifampin	310	7	2.3%	

Table 2. Impact of Antibiotic Dipping Solution on Post-Operative Revision

Antibiotic Regimen	N	# Revisions	% Revisions	P-Value (Rev)
Rifampin + Gentamicin	143	13	9.1%	0.003*
Vancomycin + Gentamicin	276	7	2.5%	
Vancomycin + Gentamicin	276	7	2.5%	<0.001*
Other + Gentamicin	177	20	11.3%	
Rifampin Use	158	17	10.8%	0.01*
No Rifampin	310	14	4.5%	

Table 3. Impact of Antibiotic Dipping Solution on Post-Operative Explantation

Antibiotic Regimen	N	# Explants	% Explants	P-Value (Exp)
Rifampin + Gentamicin	143	12	8.4%	<0.001*
Vancomycin + Gentamicin	276	3	1.1%	
Vancomycin + Gentamicin	276	3	1.1%	<0.001*
Other + Gentamicin	177	16	9.0%	
Rifampin Use	158	12	7.6%	0.006*
No Rifampin	310	7	2.3%	

Contributing Institutions: ArkLaTex Urology, Boston University, Christian Albrechts University of Kiel, CHU de Liège, Dartmouth-Hitchcock, Duke University, Einstein Healthcare Network, Fox Chase Cancer Center, Hackensack University Center, Johns Hopkins, Julius-Maximilians-University of Würzburg, Mayo Clinic, MD Anderson, Medical College of Wisconsin, Ohio State University, Perito Urology, Rutgers NJMS, Sewum Prosthetic Urology, UC San Diego

Table 4. Impact of Antifungal Dipping Solution on Post-Operative Infection

Antifungal Regimen	N	# Infections	% Infections	P-value (Inf)
Antifungal Use	190	5	2.6%	0.414
No Antifungal	278	11	4.0%	

4. Conclusions

- The use of a Vancomycin + Gentamicin antibiotic dip seems to provide the greatest protection against post-operative infections compared to other antibiotic dips in diabetic patients.
- The use of antifungal dips, however, does not seem to provide an increased protection against post-operative infections in diabetic patients.

