

The "No -touch" Technique: A Novel Technique for Reducing Post -Operative Infections in Patients Receiving Multi-Component Inflatable Penile Prosthesis



Abstract
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Abstract

Introduction and Objective:

Most infections with implanted inflatable penile prostheses are associated with organisms that colonize the skin: *Staphylococcus epidermidis*, *aureus* and *Candida albicans*. We investigated whether a novel method for implantation called the "no touch" technique could reduce post -operative infections by completely isolating the skin from the prosthesis.

Methods:

We analyzed the records of 1399 consecutive patients who underwent insertion of penile prostheses by a single surgeon over a six year period. The first 852 patients received anti-infective measures that included: pre-surgical self-cleansing with chlorhexidine soap; peri-operative prophylactic antibiotics consisting of a fluoroquinolone for three days peri-operatively and vancomycin given within two hours of incision; a surgical scrub with povidone-iodine soap, followed by an alcohol wash, and povidone-iodine paste; and standard intra-operative sterile technique with saline irrigation. The next 547 patients underwent the same pre-operative measures but standard intra-operative sterile technique was supplanted with the "no touch" technique. In this method, a drape is employed after the skin incision that effectively isolates the operative field from the surrounding skin. Using this method, all of the surgical instruments and gloves that come in contact with the skin are considered contaminated and discarded prior to placement of the "no -touch" drape. The entire procedure is performed through a small opening in the drape. A video of the technique was submitted to the 2008 AUA.

Results:

Patients were stratified into either "standard" or "no -touch" technique. No significant differences existed between these two groups with respect to age, co-morbidities (including diabetes, peripheral vascular disease, etc.) or prosthesis manufacturer. A significant difference between the two groups was observed in the rate of infections. All infections presented within three to six weeks of implantation and were diagnosed by the presence of skin tethering and pain upon manipulation of the scrotal pump.

Conclusion:

The "no touch" technique may result in a significant reduction in post -operative infections for patients undergoing implantation of inflatable penile prosthesis.

Objective

To determine whether the "no -touch" technique may reduce post-operative infections in multi-component penile prosthesis implants

No-touch Technique



After the skin, incision, a sterile drape is placed across the operative field

The drape protects the surgeons' hands and instruments from contact with the patient's skin



The drape also protects the prosthesis components from being contaminated by bacteria on the patient's skin



Methods

- 1399 consecutive patients underwent insertion of penile prosthesis by a single surgeon over a six year period
- All patients received 3 days of pre-operative oral fluoroquinolone, peri-operative vancomycin, a Betadine and alcohol scrub and prep
- The first 852 patients had implants placed using standard operating room sterile technique
- The next 547 patients had implants placed using the "no-touch" technique
- All patients were seen two weeks post-operatively
- Infection diagnosed by persistent post-operative pain, skin tethering around scrotal pump, worsening clinical post-operative course, and/or presence of purulence at time of removal, with or without positive cultures

Results

- No significant differences existed between the two groups with respect to co-morbidities or type of prosthesis that was implanted
- 19 of 852 (2.23%) patients developed an infection using standard technique
- 4 of 547 (0.73%) developed an infection using the "no-touch" technique

Table 1. Comparison of Standard technique vs. No-touch technique

Condition	Standard technique (n = 852)	No-touch technique (n = 547)	P-value
Age (mean)	61.8	64.8	NS
Diabetes mellitus	323 (37.9%)	235 (43.0%)	NS
Peripheral vascular disease	107 (12.5%)	72 (13.3%)	NS
Infections	19 (2.23%)	4 (0.73%)	0.05

Table 2. Analysis of infected patients using "no -touch" technique

Patient	Diabetic	Virgin implant	Antibiotic-coated	Culture growth
SV	No	Yes	No	Coagulase-negative Staph
ST	No	Yes	No	Coagulase-negative Staph
JR	No	Yes	No	None
JF	No	Yes	No	None

Conclusion

The "No -touch" technique may result in a significantly lower incidence of post -operative infection in patients undergoing implantation of a penile prosthesis