

Prospective Analysis of Cultures from the Furlow Insertion Tool: A Possible Etiology for Penile Prosthesis Infections

Authors: Faysal A. Yafi, Georgios Hatzichristodoulou, James Furr, Luca Venturino, Robert Andrienne, Laurence Levine, Daniar Osmonov, David Ralph, Javier Romero Otero, Maxime Sempels, Koenraad van Renterghem, Steven K. Wilson

Introduction: The most dreaded complication of penile prosthesis (PP) implantation is device infection. Infection retardant coatings, changes in prep solutions and enhancement of surgical technique have successfully decreased the infection rates in high volume surgeons to <1% in primary implantations and 2-5% in diabetic patients.

Objectives: We sought to assess whether inadequate cleaning and sterilization of the reusable Furlow inserter may represent one of the last etiologies of infection in PP patients.

Materials and methods: We performed a prospective analysis of cultures of the Furlow Inserter used for PP surgeries from 7 centers between May 1st and June 30th, 2019. Once the Furlow was received for surgery, the surgical team inspected the device for assembly status (disassembled or not) and the presence of visible stains, pieces of tissue or discoloration on either the interior of the barrel or the plunger. Swab aerobic and anaerobic bacterial and fungal cultures were then obtained from the internal component, after removal from the external component if assembled, and after introduction and immediate removal from the external component if disassembled.

Results: A total 83 Furlow devices were cultured. Median age of surgical instrument was 4 years (2-10 years). Methods of sterilization included autoclave, wet autoclave, steam and Sterrad. Median time from sterilization was 3 days (1-22). On initial presentation, 79 devices were disassembled (95.1%) and 4 devices were still assembled (4.9%). Three external components were discolored (3.6%), while internal components demonstrated 2 stains (2.4%) indicative of improper cleaning which were thought to be residual blood products. Overall, 2/83 (2.4%) devices revealed positive swab cultures for Staphylococcus Epidermidis. Swab cultures were negative for fungi and anaerobic bacteria. This patient cohort will continue to be followed to see if device infection occurs but it is unlikely to be meaningful since contaminated Furlows were discarded.

Conclusions: Improper cleaning and/or sterilization of the Furlow Insertion Instrument may represent a source of infection for patients undergoing PP implantation.