



“Preliminary study: Antimicrobial Activity of Hypochlorous Acid and its Impact on Breast Implant Surgery.”

Fisher J. Global Hot Topics: Antimicrobial Activity of Hypochlorous Acid and its Impact on Breast Implant Surgery. Presented at: American Society of Aesthetic Plastic Surgery 2017 Annual Conference; Friday April 28th, San Diego, California.

Dr. Jack Fisher, MD presented the preliminary results of a study comparing the effectiveness of four antimicrobial irrigations on planktonic form and a mature biofilm of *Ralstonia Pickettii* on three different types of silicone breast implants. Both rough and smooth textured implants were utilized to determine which solutions could result in eradication of both planktonic and biofilm organisms using time kill assays at clinical concentrations of triple antibiotic solution, chlorhexidine gluconate, povidone-iodine and pure hypochlorous acid in saline stabilized in amber glass.

Triple antibiotic solution was reported to have no impact on *R. pickettii* planktonic bacteria during initial testing and was therefore dropped from the study. All other solutions effectively eliminated all planktonic organisms rapidly within the first 1 minute assessment time.

However, solutions were differentiated in their ability to penetrate and eradicate *R. picketti* in the biofilm assays. Chlorhexidine Gluconate had no effect on reducing the biofilm associated organisms at 5 minutes and 2 hours for two different types of implants. Povidone-Iodine showed reduction in CFU/mL on 2 different types of implants and required 2 hours for complete eradication.

Only pure hypochlorous acid 0.025% stabilized in amber glass (PhaseOne®) showed eradication of all biofilm on 3 types of implants in the first five minutes. These preliminary results suggest that 0.025% HOCl (PhaseOne®) was effective in eradicating *Ralstonia pickettii* both in planktonic and biofilm forms. More research is required to substantiate these preliminary results. The full study results are detailed in an upcoming manuscript currently in-press.