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[O88] INCISE DRAPING* IS PROTECTIVE AGAINST SURGICAL SITE CONTAMINATION DURING HIP SURGERY: A PROSPECTIVE, RANDOMIZED TRIAL

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Aim: Different perioperative strategies have been implemented to reduce the devastating burden of infection following arthroplasty. The use of iodophor-impregnated adhesive incise drapes is one such strategy. Despite its wide adoption, there is little proof that this practice leads to a reduction of bacterial colonization. The aim of this randomized, prospective study was to evaluate the efficacy of iodophor-impregnated adhesive drapes for reducing bacterial count at the incision site.

Method: A total of 96 patients undergoing open joint preservation procedure of the hip were enrolled in this prospective, randomized clinical trial of iodophor-impregnated adhesive drapes*. One half of patients (n=48) had iodophor-impregnated adhesive drapes* applied to the skin prior to incision and kept on throughout the procedure, while the other half (n=48) underwent the same surgery without the use of iodophor-impregnated adhesive drapes*. Culture swabs were taken from the surgical site at five different time points during surgery (pre-skin preparation, after skin preparation, post-incision, before subcutaneous closure, and prior to dressing application) and sent for culture and colony counts. Mixed-effects and multiple logistic regression analyses were utilized.

Results: Iodophor-impregnated adhesive drapes resulted in a significant reduction of bacterial colonization of the surgical incision. At the conclusion of surgery, 12.5% (6/48) of incisions with iodophor-impregnated adhesive drapes* and 27.0% (13/48) without adhesive drapes were positive for bacteria. When controlling for preoperative colonization and other factors, patients without adhesive drapes were significantly more likely to have bacteria present at the incision at the time of closure (odds ratio (OR) 11.88, 95% confidence interval (CI) 1.45-80.00), and at all time-points when swab cultures were taken (OR 2.48, 95% CI 1.00-6.15).

Conclusions: Based on this skin sampling study, incise draping significantly reduces the rate of bacterial colonization/contamination during hip surgery. The bacterial count at the skin was extremely high in some patients without iodophor-impregnated adhesive drapes*, which raises the possibility that a subsequent surgical site infection or periprosthetic joint infection could likely arise if an implant had been utilized.

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