ΔDo Postoperative Prophylactic Antibiotics Decrease the Risk of Postoperative Infection After ORIF?--A Prospective Double-Blinded Randomized Placebo-Controlled Trial

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Purpose: To determine if postoperative prophylactic cefazolin for 23 hours postoperatively decreases the risk of infection after fracture ORIF. The benefit of preoperative prophylactic antibiotics has been established, but the benefit of postoperative antibiotics has not been justified but has become part of the SCIP initiative.

Methods: After IRB approval, patients undergoing ORIF of closed fractures that had a planned postoperative stay of at least 23 hours were randomized to either receiving 23 hours of cefazolin or a placebo. Both groups received preoperative cefazolin, based on weight, and intra-operative re-dosing at 3-hour intervals until surgery completion. The primary endpoint was infection. Patients were clinically followed until bony union.

Results: 229 patients were randomized to either receiving postoperative cefazolin or placebo, and 146 patients completed clinical follow-up to bony union. There were 75 patients in the cefazolin group and 71 in the placebo group. Infections occurred in 4 (1 superficial and 3 deep) patients in the cefazolin group and 9 (8 superficial and 1 deep) in the placebo group (p=0.12). Risk factors that significantly increased the rate of infection included diabetes (p=0.038) and surgery >3 hours (p=0.049).

Conclusions: In a randomized double-blinded placebo-controlled prospective trial, postoperative prophylactic cefazolin did not significantly decrease the risk of postoperative infection in patients undergoing ORIF for closed limb fractures. 23 hours of postoperative antibiotics should still be considered for patients with diabetes mellitus and patients where the operative time is greater than 3 hours. This still complies with the SCIP initiative.

Δ OTA Grant

- The FDA has not cleared this drug and/or medical device for the use described in this presentation (i.e., the drug or medical device is being discussed for an "off label" use). For full information, refer to page 600.