SMALL BOWEL WALL RESPONSE TO ENTEROTOMY CLOSURE WITH POLYPROPYLENE AND POLYGLACTIN 910, USING SIMPLE INTERRUPTED SUTURE PATTERN IN RATS

O.D. Eyarefe and S.A. Amid (2010)

Effects of polypropylene and polyglactin 910 on enterotomy wound healing were investigated. Sixteen adult wistar albino rats (155.44±30.4 g) were randomized into two study groups, A with polypropylene(n = 8) and B with polyglactin 910 (n = 8) following 1 cm mid-jejunal enterotomy incisions performed under ketamine/xylazine anaesthesia. Body weights changes were evaluated daily for eleven days and two rats from each group were euthanized at postoperative days 3, 5, 7 and 11. Following euthanasia, the enterotomy sites were examined for dehiscence and adhesion. Evidence of inflammatory reactions and fibroblast proliferation were also evaluated and scored. Leaks from enterotomy site were not observed. Adhesion scores in-group A(3.5) was statistically significant (p<0.05) when compared with group B (1.875). A non-statistically significant (p>0.05) but higher fibroblasts count was recorded in Group A (2.625) compared with group B (1.375). Inflammatory responses in both groups were not statistically significant, although that of Group B was higher in response than group A. Enterotomy closure with polypropylene produced significant adhesion that may be linked with the texture of the suture, and the several knots characteristic of the simple interrupted suture pattern.