

Effect of fibrin glue and comparison with suture on experimental induction of endometriosis in a rat endometrial autograft model.

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Abstract:

Objective: The effects of fibrin glue (FG) and suture were investigated and compared with experimental induction in an endometriosis model. **Material and Methods:** A randomized, controlled, and double-blind study was performed with 25 adult female Wistar Albino rats. Two autologous endometrial grafts were obtained from each of the rats. The endometrial grafts were transplanted by gluing with FG on the right abdominal wall and suturing with only 5/0 prolene on the left in ten rats. Gluing+suturing and after suturing over the covering with FG of the endometrial graft were performed, respectively, on the right and left in another ten rats. Covering with FG glue of the endometrial graft was performed in another five rats. The endometriosis-like lesions and intraperitoneal adhesions were evaluated macroscopically and histopathologically. **Results:** The mean volume (31.4 ± 17.3), adhesion (0.8 ± 0.7) and inflammatory reaction (1.2 ± 0.7) score of the implants in the group using only FG were significantly lower than in the group using suture [respectively, (49.2 ± 20.6), (2.4 ± 0.8), (2.2 ± 0.8)] ($p < 0.05$). **Conclusions:** Our results demonstrate the general feasibility of reproducible and reliable endometrial graft fixation with FG onto the inner abdominal surface in rats. Furthermore, several advantageous characteristics could be demonstrated such as less inflammation and fewer adhesions.