

Vasal reanastomosis using fibrin glue combined with sutures: Which combination of sutures in a delayed protocol? Experimental study in rats.

Authors: Vankemmel O., De la Taille A., Rigot J.M., Burnouf T., Mazeman E.

Publication Date: 1998

Abstract:

Objectives: The actual number of transmural sutures needed to ensure a successful fibrin-glued vasovasostomy is a key study parameter of the few experimental works already published. The present work was done to evaluate fibrin-glued vasovasostomy in rats in combination with only 2 transmural sutures. We compared the results to our previous study in which we demonstrated the efficiency of a combination of the use of fibrin glue with 3 sutures in comparison with a conventional microsurgical technique. **Materials and Methods:** Twenty Sprague-Dawley rats underwent bilateral vasectomy followed 2 weeks later by bilateral vasovasostomy using fibrin glue combined with 2 transmural sutures. Each animal was sacrificed 7 weeks postoperatively after a 3-week mating period with a Sprague-Dawley female rat, the vasal specimens were evaluated for sperm granuloma formation. Mean operative time and fertility rates were recorded. **Results:** The combination of fibrin glue with 2 transmural sutures gave evidence of less successful performances than the combination with 3 transmural sutures and the conventional microsurgical technique for all parameters evaluated but the mean operative time. **Conclusion:** Our study underlines the need for a third transmural suture placed 120degreeapart from the others when performing a fibrin glue delayed vasovasostomy. This allows a better vas lumen opening at the anastomotic site and therefore a more efficient vasal anastomosis in a delayed protocol.