

Possibilities and limitations of fibrin glue usage in nephron-sparing surgery: Experimental study.

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Abstract:

Introduction: The possibilities and limitations of fibrin glue (FG) usage in nephron-sparing surgery were studied. Materials and Methods: A prospective experimental study was carried out in 50 pigs: 30 with polar resection, and 20 with mediorenal wedge resection of the kidney. Hemostatic sutures, FG, and FG with a muscle 'cup' in animals with polar resection of the kidney were compared. FG and sutures in animals with the wedge resection of the kidney were studied as well. Bleeding, hot ischemia time, complication rate, and additional scarring were also analyzed. Results: Suture hemostasis is safe but with significant adverse effects in both polar and wedge resection of kidney. FG was not efficient as a sole hemostatic agent for polar resection. It was as efficient as hemostatic suture for wedge resection of the kidney. FG with a muscle 'cup' on a pole of the kidney achieved good results in animals with polar resection of the kidney. Histological analysis confirmed better results with FG because of both the less intense and smaller area of additional scarring. Conclusion: FG is a reliable and efficient hemostatic agent for nephron-sparing surgery whenever both sided gluing is possible. Copyright © 2005 S. Karger AG.