

The potential effect of biological sealants on colorectal anastomosis healing in experimental research involving severe diabetes. [Review]

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Abstract:

Colorectal anastomoses continuous to pose a significant challenge in current surgical practice. Anastomotic leakage remains one of the most frequent and dramatic complications of colorectal surgery, even in centres of high specialisation. Diabetes is a well-established independent factor which results in higher anastomotic leakage rates. Fibrin sealants have been applied in experimental and clinical studies for the prevention of anastomotic dehiscence. However, little is known regarding their impact on diabetic patients. Several fibrin sealants have been proposed as adjunct to standard surgical techniques to prevent leakage from colonic anastomoses following the reversal of temporary colostomies, approved for general haemostasis. This review summarises current advances in colorectal anastomoses and provides evidence that may strengthen the need for tissue sealants in colorectal anastomoses of diabetic patients. We searched Medline (1966-2016) and Scopus (2004-2016) for current evidence in the field. To date, there is no evidence to support the use of fibrin sealants as an adjunct in diabetic patients who undergo colorectal surgery. Experimental animal models with extreme diabetes could be of significant use in the present field and further research is needed prior to application of fibrin sealants in a clinical setting.