Experimental salvage of the spleen. A combined technique of cryosurgery and tissue sealant.

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Abstract:

The goal of this investigation has been to improve the safety of intra- and post-operative haemostasis in splenic lesions by a combined technique of tissue freezing followed by the application of collagen fleece and fibrin glue in an animal study. The progression of healing was observed after different periods of time. Grade II lesions were set on the spleens of 15 pigs. The wounds were frozen for 1 m at -60 degrees C with a cryosurgical probe and afterwards sealed with fibrin glue and collagen fleece. In every case, complete haemostasis was achieved intraoperatively. The spleens of 3 animals each were examined microscopically after 2 days, 1, 2, 5 and 6 weeks, respectively. A visceroperitoneal adhesion was observed in only 1 spleen and u-shaped viscerovisceral adhesions in 5 spleens. Superficial coagulation necroses were observed only in specimens removed after 2 days and 1 week, respectively. Complete and safe haemostasis followed by acceptable subsequent healing was achieved using this combined technique.