Experimental evaluation of gelatin adhesive. [Japanese]

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Abstract:

We examined the effectiveness of gelatin glue (GRF glue, E.H.S., France) for wound-healing in rats. On each rat, two or three 2-cm incisions were made with a scalpel in the back skin. Each wound was closed with GRF glue, fibrin glue or 3-0 nylon sutures. The tensile strength of each wound was measured and histological examination was conducted sequentially. Three days after surgery, the wounds treated with GRF glue had a higher tensile strength than those in the other two groups. From seven days of surgery, however, the tensile strength of wounds in the GRF group was not markedly greater than that of wounds in the other two groups. On histological examination, the GRF-treated wounds showed greater infiltration of inflammatory cells than the fibrin glue-treated wounds, but the GRF group showed no necrotic change in the surrounding tissue. At three weeks after surgery, the GRF glue remained in three out of six wounds, whereas the fibrin glue had disappeared by seven days in all wounds. We also examined the efficacy of GRF glue for sealing air leakage from lung tissue and for hematostasis of the liver and kidney in rabbits. GRF glue was effective for sealing air leakage from the lung tissue. It also had a hemostatic effect on oozing from parenchymal organs, but its hemostatic effect seemed insufficient for continuous arterial bleeding.