

Fibrin glue and wound healing. [Czech]

Authors: Havlicek K., Rothrockel P., Vlcek B.

Publication Date: 1992

Abstract:

Bioadhesive systems used in medicine must meet certain prerequisites on which their application depends. A very important relationship is that of glue and tissue, irritability, the influence on regeneration of tissue cells and histotoxicity. The authors evaluated in an experimental study the necroptic appearance of the peritoneal cavity, the microscopic character of the scar and histological appearance of tissue after treatment of an induced hepatic and lienal rupture in 28 rabbits and 28 baby pigs, using fibrin tissue glue. The typical properties of the adhesive fibrin system ensue from its physiological properties. Filling the wound enhances natural biological processes of healing. The tissue reaction to the applied tissue fibrin coagulum is favourable. The treated parenchymatous organs, liver and spleen, healed by a smooth scar. The number of adhesions in the peritoneal cavity in all thus treated experimental animals after treatment of the spleen was similar. Fewer adhesions were observed when using glue for repairing liver injuries in rabbits. The macroscopic appearance of the scar was similar, the scar was less visible in the liver parenchyma. The histological appearance was similar. The glue did not damage the tissue surrounding the parenchyma and did not act as a foreign body. The assessed results confirm the harmlessness of the fibrin glue, tissue tolerance and satisfactory healing with out a reaction to alien material. After healing the fibrin glue replaced by natural fibrous tissue.