Histopathological effects of fibrin glue on penile fracture in a rat model.

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Abstract:

To evaluate both histopathological effects and potential clinical application of fibrin glue on the penile cavernosal tissue. Experimental penile fracture was formed by incising from the proximal dorsal side of the penis in 32 Wistar Albino rats. The rats were randomly assigned to four main groups of eight animals each. In the control group, the incision was not repaired and it was left to secondary healing. In the primary repair group, the incision was primarily repaired. In the fibrin glue group, glue was applied only to the incision. In the final group, fibrin glue was applied to the incision following primary repair. Three weeks later, penectomy tissue was examined histopathologically. When the control group was compared with primary repair+fibrin glue group, the differences in cavernous tissue healing with fibrosis and inflammation were statistically significant ($p = 0.04$ and 0.01, respectively). The primary repair+fibrin glue group, showed the best cavernous healing with fibrosis observed in only one rat. . There was no significant difference between the control group and the other groups according to cavernous tissue healing with fibrosis and inflammation ($p = 0.11$ and 0.12). Hyperemia was observed in the all groups of rats. Fibrin glue can be used in cavernoseal surgeries due to its adhesive and potentially anti-inflammatory features.