

Autologous fibrin glue in peripheral nerve regeneration in vivo.

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Publication Date: 2005

Abstract:

The activity of several growth factors on peripheral nerve regeneration is reported. Autologous fibrin glue contains a large number of platelets, which release significant quantities of growth factors. In order to understand the role of autologous fibrin glue in peripheral nerve regeneration, a 15-mm rabbit peroneal nerve defect was repaired using a vein graft filled with autologous fibrin glue. Axonal regeneration was examined using histological and electrophysiological methods. The extent of axonal regeneration was superior when treated with autologous fibrin glue. Our data suggest that fibrin nets formed by fibrinogen, in combination with growth factors present in autologous fibrin glue, might effectively promote peripheral nerve regeneration in nerve defects. © 2005 Wiley-Liss, Inc.