Autologous fibrin glue

- Platelet rich fibrin and commercial sealants for dural closure in neurosurgery: An in vitro study
- Simple Reconstruction Method of Dural Defects for Minimal Anterior and Posterior Combined Transpetrosal Approach
- Frontal sinus mucosa suture closure technique for prevention of cerebrospinal fluid rhinorrhea after bifrontal craniotomy: long-term follow-up results
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Autologous fibrin glue (also called fibrin sealant) is a formulation used to create a fibrin clot.

It is made up of fibrinogen (lyophilised pooled human concentrate) and thrombin (bovine, which is reconstituted with calcium chloride) that are applied to the tissue sites to glue them together.

Thrombin is an enzyme and converts fibrinogen into fibrin monomers between 10 and 60 seconds giving rise to a three-dimensional gel.

Factors that influence dimensional structure of fibrin gel giving rise to fine or coarse gel

Changing concentration of fibrinogen Changing concentration of thrombine- increase concentration increases ultimate tensile strength and youngs modulus of gel Changing concentration of calcium pH Temperature It may also contain aprotinin, fibronectin and plasminogen.[9] This glue can be used for repairing dura tears, bronchial fistulas and for achieving hemostasis after spleen and liver trauma.

It is also employed in “no sutures” corneal transplantation, pterygium excision with amniotic membrane or conjunctival autograft, and in ocular trauma for corneal or conjunctival defects.

Vivostat autologous fibrin glue is a safe and effective method for fixing the grafts in endoscopic skull base repair. The advantages of this approach are easy application, elimination of the risk of allergic, immunological and infectiouscomplications, as well as acceleration of tissue regeneration [1].

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Shelesko EV, Doronina VA, Sharipov OI, Kvan OK, Chernikova NA, Strunina YV, Zinkevich DN. Primenenie autologichnogo fibrinovogo kleya v endoskopicheskoi plastike defektov osnovaniya cherepa pri nazal'nykh likvoreyakh [Autologous fibrin glue for endoscopic skull base repair in patients with cerebrospinal fluid leakage]. Zh Vopr Neirokhir Im N N Burdenko. 2023;87(1):49-54. Russian. doi: 10.17116/neiro20238701149. PMID: 36763553.