USE OF AUTOLOGOUS FIBRIN ADHESIVE IN NEUROSURGERY

Abstract:
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Introduction:
In neurosurgery, fibrin adhesive is used as a sealant to prevent cerebrospinal fluid fistulas in dural sutures after craniotomy and as a haemostatic to control capillary bleeding. In this area of surgery the only available preparation for several years has been the commercial product, which is ready-to-use and guarantees the surgeon autonomy. Automatic home-made fibrin adhesive preparation (Vivostat) has provided an opportunity to use a standard, safe and sterile product which, as an autologous product, is free from the risk of infection.

Material:
12 patients were treated, of which 4 underwent operations for meningioma, 2 for cavernous angioma, 4 for glioblastoma and 2 for cerebral metastases from melanoma.

Method:
In the majority of the operations the application was used to prevent cerebrospinal fluid leakage due to dural fistulas. In two surgeries for deep-seated meningioma, the application of the fibrin adhesive was necessary to prevent communication between the ventricular cavity and the tumoral cavity. In the glioblastoma surgeries, the purpose of the sealant application was to completely isolate the ventricular cavity, thus preventing the diffusion of the chemotherapeutic into it.

Results:
The fibrin adhesive preparations, both home-made (Vivostat) and commercial, of equal efficacy, were used with excellent results. The evaluation of the home-made autologous fibrin adhesive revealed two important characteristics: the absence of the risk of infection and ease of dispensing. Although dispensing is slower than that of the commercial product it is nevertheless possible to reach all areas and apply product in a uniform manner thanks to the special structural features of the dispensing pen.