Use of fibrin sealant (Vivostat®) in skull base surgery

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ABSTRACT

Introduction
Fibrin sealants are widely used as topical hemostatic agents and tissue adhesive that contain fibrinogen and thrombin. A large number of sealants and tissue adhesives are referenced in medical literature, from closures to serve as medicament. For skull base surgery to become a valuable adjunct in a broad range of surgical scenarios, a fibrin sealant is required. One of these sealants is Vivostat® (only approved in Europe). The possibility of being a patient-derived hemostat and tissue adhesive with enhanced elasticity and tensile strength that allows a safer and better performance of wound management, especially in skull base surgery.

Methods and materials:
We present our experience with Vivostat® (Vivostat A/S, Alleroed, Denmark) is a system for the preparation and application of a sealant made from patient’s own blood. In this study 36 patients underwent skull base surgery and Vivostat® was applied either to achieve hemostasis or to seal and promote tissue growth and repair. The aim of this study is to analyze how accurate this sealant is to control bleeding, to seal and to promote tissue growth and repair for endoscopic skull base surgeries.

Results:
Thirty six patients underwent skull base surgery and Vivostat® was applied either to achieve hemostasis or to seal and promote tissue growth and repair. The procedure indicated.

Conclusions:
This clinical study suggests that the use of Vivostat facilitates wound healing in surgical practice and can be considered a useful tool for skull base defects, infratemporal approaches and endoscopic sinus surgery in order to avoid fistulas of the skull base and to promote adequate tissue regeneration and healing.