Hemostatic material

- The Multifunctional Antioxidant Self-Healing Hydrogel for Rapid Hemostasis and Abdominal Aorta Wound Healing
- Tranexamic acid vs. embolization of the meningeal artery as an adjunctive therapeutic regime to reduce the recurrence rate after surgical relief of chronic subdural hematomas (TABASCO)-a randomized controlled trial
- Engineered biodegradables fibres for brain metal ion regulation
- Tumor Embolization Using a Small-Bore Guide via the Distal Radial Artery Approach: Report of Five Consecutive Cases
- A Simple Technique of Cerebrospinal Fluid Leak Prevention Following Endoscopic Third Ventriculostomy: A Technical Note
- Sulfated chitosan directs the recovery of ischemic stroke by attenuating the inflammatory cascade
- Relationship between Tranexamic Acid Use and Safety in Patients with Acute Brain Injury: A Systematic Review and Meta-analysis of Mortality and Thromboembolic Events
- Pulmonary embolism of haemostatic material during paediatric neurosurgery

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One of the various methods to minimize postoperative hemorrhage is the local application of a hemostatic agent.

In neurosurgical practice, biosurgical hemostatic agents have proved to be extremely useful to complete the more classic use of electrocoagulation.

During recent years, many biosurgical topical hemostatic agents were created. Although routinely used during neurosurgical procedures, there is still a great deal of confusion concerning optimal use of these products, because of the wide range of products, as absorbable topical agents, antifibrinolytics agents, fibrin sealants and hemostatic matrix, which perform their hemostatic action in different ways. The choice of the hemostatic agent and the strategy for local hemostasis are correlated with the neurosurgical approach, the source of bleeding, and the neurosurgeon's practice.

AnkaferdBlood Stopper (herbal hemostatic)

SeraSeal (agar and bovine factor proteins)

FLOSEAL

Hemofence

SURGIFLO (gelatin paste)

HELITENE (absorbable collagen)

Beriplast (fibrin sealant containing fibrinogen, factor XIII, and thrombin),

TISSEEL (fibrin sealant)

BLOODCARE (hemostatic powder)

SURGICEL (oxidized cellulose polymer)

Hemostatic agents can cause notable histopathologic alterations, including inflammation, fibrosis, and vascularity. In this context, flowable hemostats such as gelatin granules and thrombin or gelatin paste seem to provide more promising results in spinal surgery [1].

Gazzeri et al., review all the different sources of bleeding during intracranial surgical approaches and analyze how to best choose the right topical hemostatic agent to stop bleeding, from the beginning of the surgical approach to the end of the extradural hemostasis after dural closure, along all the steps of the neurosurgical procedure [2].

see Absorbable hemostatic material

1)
Altun I. An Experimental Study of Histopathologic Effects of Hemostatic Agents Used in Spinal Surgery. World Neurosurg. 2016 Jun;90:147-153. doi: 10.1016/j.wneu.2016.02.052. Epub 2016 Feb 18. PubMed PMID: 26898493.
2)
Gazzeri R, Galarza M, Callovini G, Alfieri A. Biosurgical Hemostatic Agents in Neurosurgical Intracranial Procedures. Surg Technol Int. 2017 Feb 7;30. pii: sti30/811. [Epub ahead of print] PubMed PMID: 28182825.