Intraoperative Intratumoral Embolization of a Complex Recurrent Hemangiopericytoma: Technical Report and Review of the Literature.

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Abstract:

Objective Recurrent brain tumors represent a challenge for neurosurgeons because of the extensive blood loss and the time needed for surgical resection. Only a few hemostatic agents are useful to prevent the bleeding and thus facilitate the surgical resection. Fibrin sealant can be used to achieve sealing, tissue adherence, or hemostasis when other means of hemostasis are inadequate or inappropriate. We report the feasibility and positive effects of direct intratumoral injection of fibrin sealant during resection of a recurrent hemangiopericytoma. Material and Methods The intraoperative intratumoral injection of fibrin sealant changed the tumor properties of a recurrent hemangiopericytoma of the tentorium with infra- and supratentorial extension. From a loose friable briskly bleeding tumor, this complex lesion became a nonbleeding well-demarcated soft-firm tumor that could easily be dissected off the pial surface and totally resected without extensive bleeding. Results There are several benefits of intratumoral injection of fibrin sealant in hemangiopericytomas: (1) the extensive bleeding is diminished and blood loss minimized; (2) the restriction of the surgical view by the venous oozing is diminished, making the microsurgical dissection of the tumor capsule off the pial surface easier and safer; (3) the loose consistency of the tumor becomes firmer and facilitates the manipulation of the tumor and leads to a safer resection; and (4) a shorter operating time is needed. Conclusion The use of intratumoral fibrin glue injection is a safe and useful technique that could be used for hemostasis of highly vascularized tumors to facilitate a safer resection and to reduce blood loss.