Perioperative treatment meningioma complicated by intracerebral haemorrhage in patient with Klippel-Trenaunay syndrome – case report

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Background

Klippel-Trenaunay syndrome (KTS) is a syndrome characterized by a disorder of the development of blood vessels, soft tissues (skin and muscles) and bones – cutaneous hemangiomas (port-wine stains), abnormal growth of soft tissues and bones and venous malformations with tendency to bleeding or thrombosis. The association of KTS with intracranial tumors is extremely rare and is described as a sporadic case in the literature.

Case Report

Patient in our study was a female, 41 years old, with Klippel-Trenaunay syndrome and a meningioma complicated by postoperative intracerebral haemorrhage. The patient was hospitalized for partial seizures and right hemiparesis (Todd's paralysis). After diagnostic treatment (CT and MR), the diagnosis of intracranial tumor was established. A surgery was performed in a balanced anesthetic technique (Sevofluran-Fentanyl-Atracurium).

Immediate postoperative period went without complications – patient was conscious, haemodynamically stable, spontaneously breathing, without neurological deficits. During the second postoperative day, the neurological condition of the patient had worsened with loss of consciousness and the development of right-sided hemiplegia. The control CT scans showed intracerebral hemorrhage with pronounced perifocal edema, a generalized edema with a threatening transtentorial herniation

Glasgow coma score was 8. The patient was put on mechanical ventilation, conservatively treated (antiedematous and corticosteroid therapy) and introduced into the barbiturate coma (Tiopental). Four days later, Tiopental was disconnected. On the seventh day, the patient has awoken - conscious, stable vital signs, weaned from mechanical ventilation with residual right-sided hemiparesis. Control CT scans showed a decrease in the size of the hematoma and brain edema. The ninth day patient was transferred to the neurosurgery department for further treatment, and on the 26th day to rehabilitation physical treatment.

Discussion

The association of KTS with intracranial lesions requiring surgical treatment presents the challenge of the entire surgical and anesthetic team. Venous and capillary malformations, characteristic of this syndrome, lead to significantly more frequent bleeding intraoperatively and postoperatively, which requires the administration of transfusion and prolongs the postoperative recovery and duration of treatment.

Learning points

Taking into account abnormalities that accompany this syndrome - tendency to bleeding and deep venous thrombosis due to malformations of blood vessels, tendencies to soft tissue and skin infections, it is necessary to pay attention in postoperative period due to early recognition and effective treatment of complications

Literature

1. Tefvik Yilmaz, Ulas Cikla, Alice Kirst and Mustafa K Baskaya. Glioblastoma multiforme and Klippel-Trenaunay-Weber syndrome: a case report. Journal of Medical Case Reports (2015) 9:83.