

Anesthetic approach for removal of brain tumor with coexistent cerebral aneurysm



Natali Delipetrova, Martin Lazarevski, Marjan Mihailov, Biljana Eftimova

Department of Anesthesia, reanimation and intensive care, Clinical Hospital, Stip, Republic of North Macedonia

Faculty of Medical Sciences, Goce Delcev University, Stip, North Macedonia

INTRODUCTION

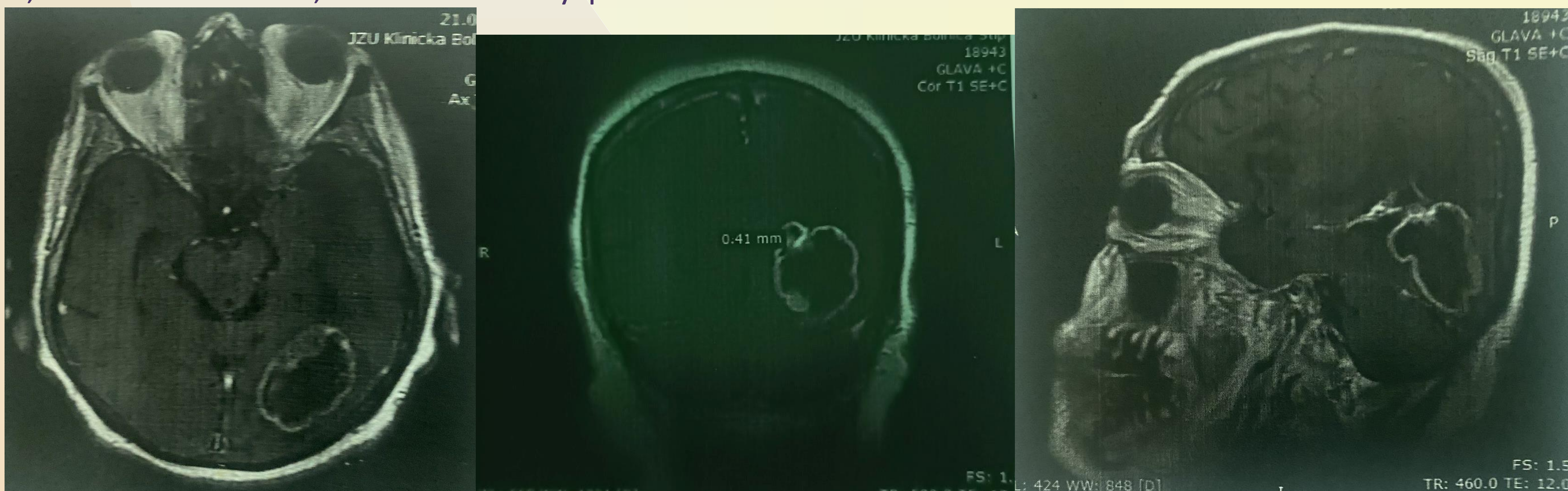
Primary brain tumors associated with intracranial aneurysm are rare. A combination of glioblastoma multiforme (GBM) with cerebral aneurysm is even more rare.

OBJECTIVES

Our aim is to point out the specifics in anesthesia management in this case where two coexisting neurosurgical pathologies are present.

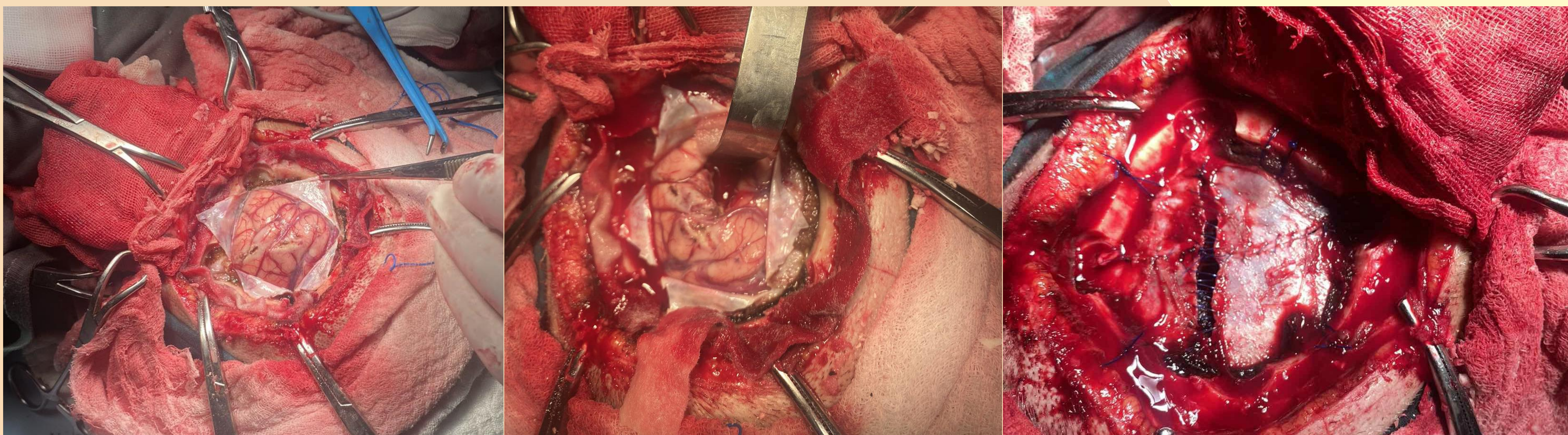
MATERIAL AND METHODS

Case of a 71-year-old male, admitted for removal of a brain tumor, most likely glioblastoma multiforme. Imaging scans – CT and MRI confirmed a mass with the size of 31x27 mm, located in the occipital region of the brain, with mild brain oedema. Along with the brain mass, the patient had an unruptured aneurysm of the anterior communicating artery. The patient was also previously operated on for an abdominal aortic aneurysm. On admission, he was somnolent, confused and dysphasic.



RESULTS

Prior to the operation, a central venous line was placed in the right femoral vein and the patient was premedicated with benzodiazepines. The surgical intervention was done under general anesthesia with propofol, remifentanyl, sevoflurane and rocuronium. Intraoperatively, to reduce the brain oedema, Mannitol 20% and dexamethasone were administered. During the surgery, the patient was hemodynamically stable and had no great blood loss. Apart from receiving crystalloids, the patient was substituted with 3 units of fresh frozen plasma. In advance, the patient also was administered tranexamic acid.



CONCLUSION

The main goal of the anesthetic management in this case was to prevent variations in the arterial blood pressure and cerebral perfusion pressure, ultimately decreasing the possibility of rupturing the aneurysm. The choice of anesthetic agents to achieve this effect is essential and must be taken into account prior to the surgical procedure.