NI-77. SURGICAL TREATMENTS FOR LARGE AND GIANT MENINGIOMAS: EXPERIENCES WITH 35 CONSECUTIVE PATIENTS

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INTRODUCTION: Resecting large and giant intracranial meningiomas can be challenging. Excellent surgical skills and rational surgical plans are very important for ideal tumor resections and less complications. We evaluated the use of three-dimensional computed tomographic angiography (3D-CTA) and rational reconstruction for the surgical removal of large and giant meningiomas in this study. METHODS: A retrospective review of 35 patients with large and giant meningiomas between Jan 2009 and Nov 2011 with a minimum follow-up of 12 months was studied. All the patients were operated by one neurosurgeon. More attentions were paid to the vessels protection during resection and reconstruction after resection. The average tumor volume was 92.94 cm³ (range 50-147 cm³). 14 patients had 3D-CTA studies performed for diagnostic evaluation or preoperative planning and 21 patients had no 3D-CTA examinations. We analyzed the clinical data, radiological findings, surgical treatment, histology, blood testing result and outcome of patients. RESULTS: Gross tumour resection (GTR) was accomplished in 31 (88.6%) patients, subtotal resection (STR) in 3 (8.6%) patients and partial resection in 1 (2.9%) patient. One patient died five days after operation because of severe brain edema. Postoperative complications (cerebrospinal fluid leakage, quadriplegia) were observed in 3 (8.6%) patients and no deficits were found before discharge. Postoperative radiation was administered to 7 of the 35 patients who had residual tumors or malignant meningiomas. Patients without preoperative 3D-CTA experienced a higher blood loss during the operation (822.7 ml compared with 466.7 ml) (p = 0.095) and had a lower HGB level compared with patients with 3D-CTA (98.3 g/l compared with 114.6 g/l) (p = 0.046). CONCLUSIONS: The findings of this study suggested that preoperative 3D-CTA has great benefits for the operative bleeding control and adjacent vessels protections. Rational reconstructions after resections are very important for avoiding complications for large and giant meningiomas surgeries.