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P-169 - INTRAOPERATIVE ULTRASOUND-ASSISTED SURGERY IN ORBITAL APEX TUMOURS: TECHNICAL NOTE

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Resumen

Introduction: Since the introduction of ultrasonography (US) in the operating theatre in the early 1970s, intraoperative ultrasound (IOUS) has become a very useful tool for real-time neurosurgical procedures. The main limitation of US is its innately reduced capacity to penetrate the intact skull. This is the reason why most IOUS-assisted procedures are usually performed via transfontanellar or after a craniotomy or laminotomy is done.

Case report: We present a 54-year-old woman with a right optic nerve sheath meningioma, who was operated on by a right cranio-orbital approach and IOUS-assisted tumour removal. Data concerning the anamnesis and complementary studies were obtained from the clinical history. Surgical images were obtained in the operating room during surgery. Images obtained by US were compared with the preoperative and postoperative imaging scans. IOUS imaging was also compared with the intraoperative findings. Results The correlation between US and both preoperative and postoperative studies was very high. During surgery, both transpalpebral and transperiorbital IOUS facilitated the resection with no specific technical difficulties or significant time consumption.

Discussion: Recent improvements in the image quality of IOUS devices offer several attractive options for real-time neuronavigation. We describe our initial experience with the IOUS-assisted technique for orbital apex tumours. In our patient transpalpebral and transperiorbital IOUS provided an excellent source of control over location and over the extent of tumour resection. We hope that this description of how we usually perform this procedure may be useful for some selected cases and contribute to the further enhancement and improvement of the technique.