Endoscopic spine surgery with Easy GO: an analysis after 200 procedures

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The indication for endoscopic assisted surgery in skull bases processes is under controversial discussion. Experienced skull base surgeons often consider the endoscope to be unnecessary while a younger generation of surgeons counts on the value of the endoscope in such procedures. Here, we present our series of endoscope assisted procedures performed since February 2003. During the investigated time period, a total of 282 skull base cases was operated on with application of the endoscope. The endoscope was not routinely applied but only when it was felt to be helpful in each individual case. The application of the endoscope was evaluated with respect to the frequency and the duration of the assistance and with respect to the subjective value for the individual surgeon. All patients were postoperatively followed. In all cases, an early postoperative MRI was performed for resection control.

The 285 skull base cases consisted of 128 vestibular neurinomas, 4 trigeminal neurinomas, 20 planum sphenoidale meningiomas, 16 cerebello pontine angle meningiomas, 10 arachnoid cysts, 18 craniopharyngiomas, 14 pineal lesions, 22 aneurysms, 10 hemifacial spasms, 21 trigeminal neuralgias, 8 epidermoids, and 3 others. Overall the endoscope was considered to be helpful in 225 of 282 cases (80%). It was considered to be indispensable in 39 cases (14%). In vestibular neurinomas, the endoscope was used for inspection in 105 cases (82%) and for endoscopic assistance in 23 (18%). The technique was considered to be indispensable in high jugular bulb and deep intrameatal tumour. The endoscope was considered helpful in 93 (73%) and indispensable in 19 (15%).

In craniopharyngiomas, the endoscope was used for inspection in fourteen cases (78%) and for endoscopic assistance in 4 (22%). The endoscope was considered helpful in 14 (78%) and indispensable in 4 (22%). One transient oculomotor palsy occurred possibly due to the light source temperature. In hemifacial spasm, the endoscope was used in 100% for inspection and was considered to be helpful in all cases. In aneurysms, the endoscope was applied for inspection in 22 cases (100%). It was considered to be helpful in 16 (72%) and indispensable in 6 (28%). It was particularly helpful in PCom, BA, and A1 aneurysm surgery to excluded clipping of perforators.

In all, the authors consider endoscopic assistance a valuable tool in selected cases of skull base procedure with being indispensable in a small subgroup of these procedures.