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Endoscopic versus microscopic approach for management of pituitary tumors

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Pituitary tumors are most commonly approached through the trans sphenoidal approach, and tumor resection is most often performed using the operating microscope. More recently the endoscope has been introduced for use either as an adjunct to or in lieu of the microscope. Both the microscopic and endoscopic transsphenoidal approaches to pituitary tumors allow safe and effective tumor resection. This study showed the advantages and disadvantages of the pure transsphenoidal endoscopic approach compared with the standard microscopic approach. Patients and methods: This is a retrospective study of forty patients presented with pituitary macroadenoma including both sexes, with ranging age from 20-50 years. These patients presented to the neurosurgery department of Al-Azhar university hospitals during the period from October 2010 to October 2013. The Patients were divided into two groups: The 1st group; included 20 patients, who subjected to endoscopic endonasal transsphenoidal pituitary surgery. The 2nd group; included 20 patients, were subjected to classic microscopic sublabial transsphenoidal pituitary surgery. Results: This comparative study was including two groups; the first group representing twenty patients with pituitary tumors who operated using endoscopic transsphenoidal technique; and the second group showed twenty patients with pituitary tumors were operated using the microscopic sublabial transsphenoidal technique. The patients in the first group included 5 males (25%) and 15 females (75%) and in the second group included 8 males (40%) and 12 females (60%) with age ranging from (20-50) years (median: 35 years). They are presented by one or more symptoms. The commonest symptoms were headache (92.5%), followed by endocrinal

symptoms (80%), then visual symptoms (75%). In the first group total removal of the lesion was achieved in 10 cases (50%), while subtotal removal was achieved in 8 cases (40%), and partial removal was achieved in 2 cases (10%). While in the second group total removal was achieved in 5 cases (25%), subtotal removal was achieved in 7 cases (35%) and partial removal was achieved in 8 cases (40%). Conclusion: The pure endoscopic approach is a safe, effective approach to sellar region tumors that offers several advantages over the microscopic approach. It provides an excellent wide-angle and magnified view of the operative anatomy, and although it requires more anatomical exposure it remains within the group of minimally invasive approaches to the sella. High disease control rates and low rates of complications are some of the most important points related to the technique. Some of the factors related to the success of endoscopic surgery are lesion size, suprasellar/ parasellar extension, and the degree of sella floor erosion.

Speaker Biography

Mahmoud Farid Neurosurgery MD, Ph.D. associate professor of Neurosurgery faculty of medicine Al Azhar University. Has completed his Ph.D. of Neurological surgery at Al Azhar University, Cairo, Egypt in 2004. His specialist training involved intense study, research and teaching of both non operative and operative care and treatment of spine and brain surgery. He has authored numerous public international and national works and provides presentations on topics related to the brain and spinal lesions. Expertise in all neurological field and special interest in skull base surgery and microscopic minimal invasive spine surgery. He has experience of work in the Neurosurgery field in Gulf area from 2010 until present were cranial and spinal cases has been managed as well as the peripheral nerves lesions.

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