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Introduction

•We believe that to properly understand the transphenoidal hypophysectomy technique it is important to have a brief and approximate history, based on many publications, of the approaches to the sellar region.

Methods

•The authors undertook a bibliographic review on many historical publications, educational sites, e.g. PubMed, MEDLINE, the Cochran Database and manuscripts.

Results

•The current pituitary surgery can be done by the transnasal, transcranial and skull base access, including the craniofacials and transoral.

Conclusions

We believe that to properly understand the transphenoidal hypophysectomy technique it is important to have a brief and approximate history - based on many publications of the approaches to the sellar region that coincides with some history of the otorhinolaryngology and neurosurgery, specially with the skull-base surgery. The biograph research shows that the pioneers were usually scientists and/or general surgeons with much eclectic formation; some were interested in physiology, anatomy, endocrinology, rhynology, otology or neurological surgery, and also politics, art, geosciences and astronomy.

Following Hardy and Jane et al, we understand that the current pituitary surgery can be done by the transnasal, transcranial and skull base access, including the craniofacials and transoral.

In the transnasal approach there are three transphenoidal accesses: (1) the endonasal submucosal septal lateral of Kocher-Hirsch, (2) the sublabial midline submucosal rhinoseptal with sequential improvements carried out by Halstead-Cushing-Dott-Guiott-Hardy, and (3) the direct extramucosal transnasal with the use of microscope or endoscope.

•The transcranial approach is constituted by (1) the subfrontal basal of Krause, or actually, of Krause and Horsley with or without resection of the orbital ridge and (2) the subfrontotemporal, initially accomplished in 1918 by George J. Heuer at Johns Hopkins Hospital, being adopted and modified in 1942 by Walter E. Dandy, extended by Ludwig G. Kempe in 1968 to allow retract more the temporal lobe and refined in 1975 by Yasargil et al with interfascial approach, drilling of the sphenoid ridge and a wider opening of the sylvian fissure;

•In the skull base approach, current accesses are (1) the orbitozygomatic infratemporal of Hakuba published in 1986, (2) the supraorbital-pterional of Al-Mefty in 1987 and (3) eventually, the craniofacial derived from the pioneer surgery of Schloffer as the Chiari, Hamburger et al and Macbeth et al.

The pioneering works with resection of the orbital ridge belong to McArthur, Frazier and Jane et al. The idea of orbitofrontomalar approach was initiated by Pellerin et al in 1985 and the orbitozygomatic craniotomy was improved by Ikeda et al in 1991 transforming it in an one-piece approach.

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Learning Objectives

To review the history and thinking new possibilities for the future sellar neurosurgery