ENDOSCOPIC TRANSNASAL APPROACH TO THE MIDLINE SKULL BASE

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Basic concepts to expose areas around the sella

middle turbinectomy

removal of posterior nasal septum
Extended approach to the cavernous sinus
Intracavernous ICA

(opening of the carotid protuberances)
Intracavernous segments of the ICA
The opto-carotid recess
Ophtalmic artery
ENDOSCOPIC APPROACHES TO THE CAVERNOUS SINUS

Medial corridor to the ICA

Lateral corridor to the ICA

Contra-lateral “standard” approach

Omolateral “far lateral” approach
Contra-lateral "standard" approach

Medial corridor to the ICA
Lateral corridor to the ICA

Omolateral “far lateral” transethmoidal approach
“far lateral”
transethmoidal route
lateral wall of the sphenoid sinus
Lateral corridor to the ICA

neurovascular structures
Lateral corridor to the ICA
Superior triangular area

Endonasal view

Transcranial view
Superior and inferior quadrangular areas

Endonasal view

Transcranial view
Planum sphenoidale
Extended approach to the planum sphenoidale

bone relationships
Anatomic dissection

Exposure of the planum sphenoidale
Identification of the posterior ethmoidal arteries

Removal of the planum sphenoidale
Intradural exploration

above the chiasm

below the chiasm
below the chiasm
Transcranial view
Olphactory groove
ethmoidectomy

Isolation of etmoidal arteries
Removal of the olphactory groove

Intradural exploration
Clivus and CVJ

Endoscopic trajectories

clivus

CVJ
Bone landmarks

antero-lateral view

antero-lateral view
Bone landmarks

- Hypoglossal canal (condyle: 1/3 anteriorly 2/3 posteriorly)
- Articular surface of the condyle (lateral surface rather than the medial)
vomer removal

identification of vidian nerves
preparation of the mucosal flap
clival bone removal
identification of the abducens
intradural exploration
identification of the atlas

removal of the mucosa of the rhinopharynx
lateralization of the muscles

removal of the anterior arch of C1
exposure of the dens with its ligaments

drilling of the dens
dissection and removal of the dens
after the removal of the dens (from Pituitary gland to C2)  
~ 6 cm

after the removal of the clivus (from Pituitary gland to C1)  
~ 4 cm
intradural exploration
Extended Approach to the Clivus and Cranio-Vertebral Junction
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Course Directors: Enrico de Divitiis, Paolo Cappabianca, Amin B. Kassam

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