

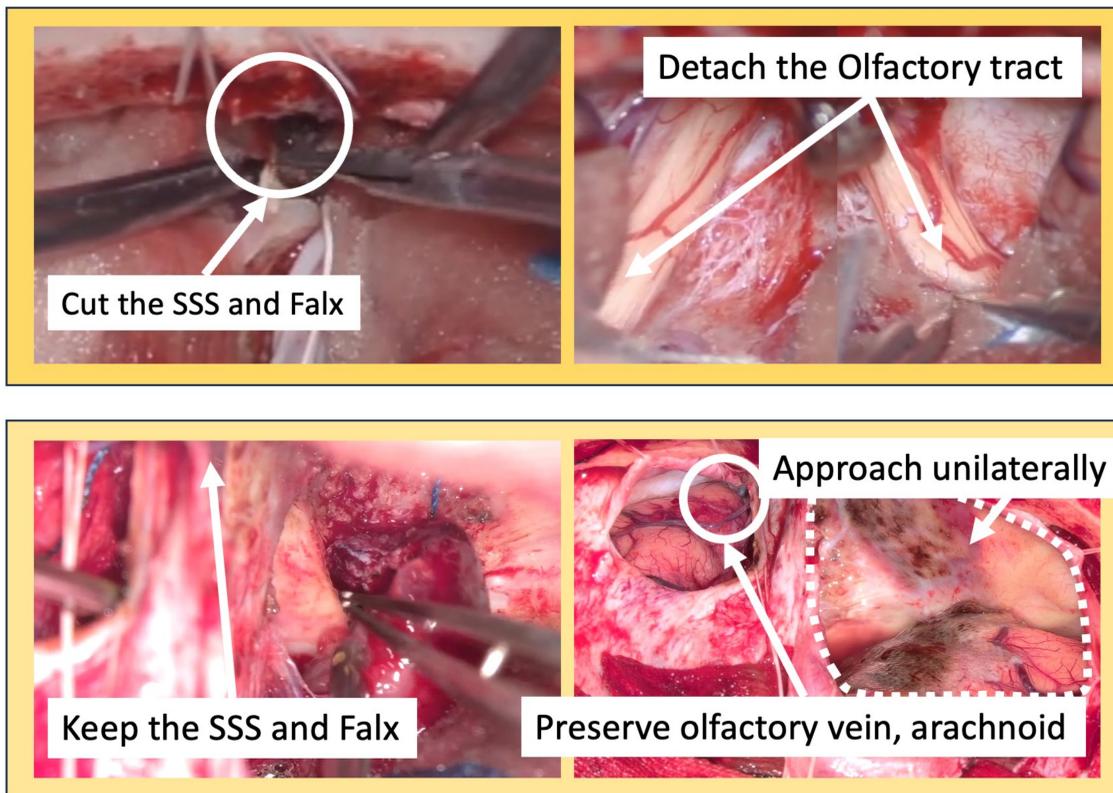
Tips to preserve olfaction in the basal interhemispheric (BIH) approach



Seiichiro Eguchi, MD, PhD; Shuhei Morita, MD, PhD
Takakazu Kawamata, MD, PhD

Department of Neurosurgery, Tokyo Women's Medical University

TIPS TO PRESERVE OLFACTION IN THE BIH APPROACH



Classic BIH

New-onset anosmia

11.5%



0%

Modified BIH

Introduction

Anosmia is major complication of basal interhemispheric (BIH) approach. Presenting our tips to preserve olfaction.

Methods and Materials

- Study patients: 26 cases of olfactory groove (OG) and planum sphenoidare (PS) meningiomas

		N = 26
Age	years	63.1 ± 11.5
Sex	woman	15
Pre-operative symptoms	anosmia	2
	visual disturbance	4
	others	12
	asymptomatic	5
Tumor size	mm	42.9 ± 12.8

Table 1. Characteristics of study patients

- Traditional surgical procedure of BIH
 - 1) Bilateral "W" shaped dural incision
 - 2) Ligate and cut the SSS
 - 4) Detach the bilateral olfactory bulbs and tracts from the frontal lobe
 - Open the interhemispheric fissure
 - 5) Expose and remove the tumor

Modified BIH

- 1) Unilateral dural incision
- 2) Detach the ipsilateral olfactory bulb and tract from the frontal lobe
- 3) Open the interhemispheric fissure
- 4) Expose and remove the ipsilateral tumor
- 5) Cut the falx or open the contralateral dura (preserve contralateral olfactory vein and arachnoid)
- 6) Remove the contralateral tumor from unilatera side

Results

	New-onset Anosmia
Classic BIH	11.5%
Modified BIH	0%

Discussion

- Fixation and moisturization of olfactory tracts with gelfoam and fibrin glue is effective to avoid nerve injury.

But, retraction of olfactory nerves is unavoidable by aspiration of CSF during the long surgeries.

- Anterior interhemispheric approach had more complication of olfactory dysfunction.

Unilateral dural incision and unilateral brain retraction without elevation of frontal lobe is important.

- Between unilateral and bilateral approaches, no significant difference in post-operative new-onset anosmia.

However, bilateral approach has a significantly higher risks of surgical complications and poorer outcomes.

Conclusions

- To preserve olfaction, keep the the unilateral olfactory vein and arachnoid around the olfactory tract.
- Unilateral trans-falcine approach (modified BIH) is better the classic one.

Contact

Seiichiro Eguchi
Department of Neurosurgery
8-1 Kawadacho, Shinjuku-ku, Tokyo, 1628666, Japan
E-mail: eguchi.seiichiro@twmu.ac.jp
Phone: +81-3-3353-8111 (ex 28631)

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