Microsurgical Resection of a Large Dumbbell-Shaped Jugular Foramen Schwannoma via Infralabyrinthine, Retrofacial, and Transjugular Approach

Daisu Abe[1] Masaru Aoyagi[1,2]

[1] Department of Neurosurgery, Shioda Memorial Hospital, Chiba, Japan
[2] Department of Neurosurgery, Kameda Medical Center, Chiba, Japan

J Neurol Surg B 2021;82(suppl S1):S57–S58.

Address for correspondence Daisu Abe, MD, Department of Neurosurgery, Shioda Memorial Hospital, 550-1 Kouri, Nagara, Chosei-gun, Chiba, 297-0203, Japan (e-mail: daisu.abe@gmail.com).

Abstract

Surgical removal of large jugular foramen schwannomas with intra- and extracranial extension is challenging. The treatment goal is a gross total resection of the tumor without causing surgical complications, including facial nerve paresis, hearing disturbance, dysphagia, hoarseness, and cerebrospinal fluid (CSF) leakage, in addition to the brain stem injury.

We present a surgical video in a patient with a dumbbell-shaped glossopharyngeal schwannoma. The combination of posterior fossa craniotomy, mastoidectomy, and unroofing of the jugular foramen with high cervical exposure was selected. Although transposition of the mastoid segment of the facial nerve provides an excellent surgical corridor, it may affect normal facial nerve function. Sufficient drilling of the infralabyrinthine, retrofacial area of the mastoid without facial nerve transposition is important for the safe gross total removal of the tumor. Subcapsular removal behind the jugular vein is also important for preservation of the lower cranial nerve functions.

The patient underwent a gross total removal of the tumor (►**Figs. 1** and **2**). Facial nerve function was preserved and hearing disturbance improved. Although dysphagia and hoarseness complicated postoperatively, he became able to take foods orally 16 days after the surgery.

In summary, successful removal of a large dumbbell-shaped jugular foramen tumor can be completed via infralabyrinthine, retrofacial, and transjugular approach without facial nerve transposition.

The link to the video can be found at: https://youtu.be/U4CwOW78id4.

Keywords
- ► jugular foramen
- ► transjugular approach
- ► surgery
- ► schwannoma

Conflict of Interest
None declared.

www.thieme.com/skullbasevideos

www.thieme.com/jnlsbvideos

received
February 27, 2019
accepted
January 13, 2020
published online
November 5, 2020

DOI https://doi.org/10.1055/s-0040-1705167.
ISSN 2193-6331.

Georg Thieme Verlag KG, Rüdigerstraße 14, 70469 Stuttgart, Germany

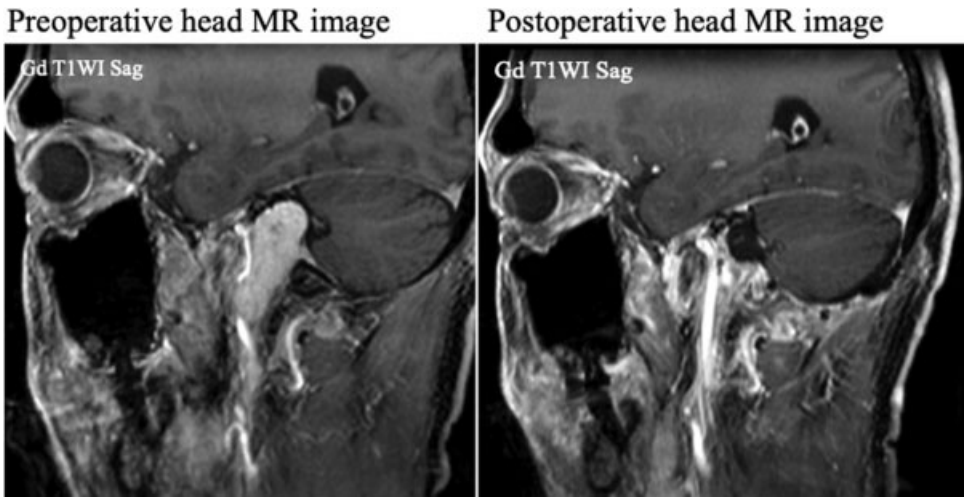

Fig. 1 Pre- and postoperative MR images. MR, magnetic resonance.

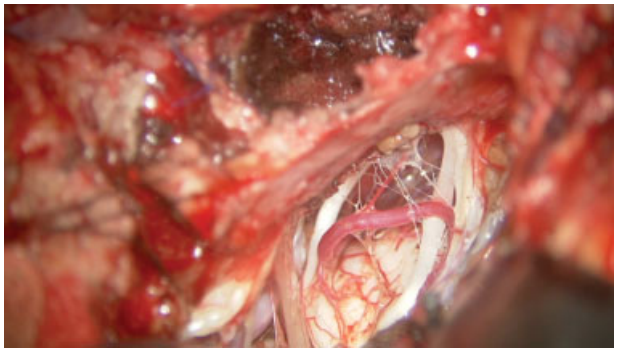

Fig. 2 Intraoperative image.