A Case of Meningioma Resection with Endoscopic Sinus Surgery after Gamma Knife Irradiation

Kana Lee¹⁾, Kunihiro Makino¹⁾ and Takeshi Kondo²⁾

Meningiomas account for 10–15% of all intracranial tumors, but less than 1–2% of them extend extracranially. They are benign tumors that originate in the meningotheelial cells of the arachnoid granulations overlying the convexity of the brain and the skull base. We herein report on a case of meningioma that extended into the nasal cavity from the cavernous sinus, treated with surgical excision after Gamma-Knife irradiation. With the use of the Gamma-Knife procedure, the tumor was resected with less bleeding. In addition, Gamma-Knife irradiation increases the granulation that blocks the leakage of cerebrospinal if there are bone defects.

Keywords : meningioma, endoscopic sinus surgery, Gamma Knife

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1) Department of Otorhinolaryngology, Shin-Suma Hospital

2) Department of Neurosurgery, Shin-Suma Hospital

Corresponding Author Address : Kana Lee

kanalee530@aqua.email.ne.jp

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Enhanced MRI (T1) before surgery
Heterogeneous enhancement of the tumor can be seen.

CT
Defects can be seen on the lateral and superior walls of the sphenoid sinus.

25 months after Gamma-Knife irradiation
There is no enlargement of the tumor.

Enhanced MRI (25 months after Gamma-Knife irradiation)
Residual tumor can be seen at the lateral side of the sphenoid sinus.