

JOURNAL OF NEUROSURGERY:  
**Case Lessons**

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**Supplemental material**

<https://thejns.org/doi/abs/10.3171/CASE24218>

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#	Sex	Age	Side	Diagnosis	Location	EMMM	Ports				Comb. app.	Procedures	Flap (P=pedicled,F=free)	Complications	Outcom	Sacrificed nasal structures						Adjuvant		
							Nostril		Sublabial							Ipsi.			Cont.					
							Ipsi.	Con.	Ipsi.	Con.						S	M	I	S	M	I			
1	F	14	L	Cholesterol granuloma	PA	No	o	o				PS, Eth, TPIP, Bil. ExSph	Middle turbinate flap (PF)	None	Complete opening				P					
2	F	56	L	Chondrosarcoma	SS, Cliv, PA, CS	No	o	o				PS, Eth, TP, TC, TS, Max., Bil. ExSph	Nasal septum flap (FF)	None	Near total resection									
3	F	64	L	Adenoid cystic carcinoma(pT4N0M0)	ITF, PPF	Yes	o	o	o			Eth, MT, TP, Bil. ExSph	None	Lt. OME	Near total resection		T							CRT (70G)
4	F	46	L	Cholesterol granuloma	PA	No	o	o				TS, Bil.ExSph	None	None	Complete opening									
5	M	53	R	Schwannoma	MCB, PPF, CS, SS, MS	Yes	o	o	o			Bil. ExSph	Middle turbinate (PF) and nasal septum flaps (PF)	Palatal Numbness, Dry eye	Gross total resection		P							
6	M	17	L	Meningoencephalocele	LRSS	Yes	o	o				Max, TS, TP, PS, Eth, Bil. ExSph	Middle turbinate flap (PF)	None	No epilepsy									
7	M	15	R	Angiofibroma	PPF, ITF, CNM, NF	Yes	o	o	o			PS, Eth, MT, ST, TP, Bil. ExSph	None	CN V2 palsy	Gross total resection	T	T							
8	M	13	L	Angiofibroma	PPF, ITF, CNM, NF	Yes	o	o	o			PS, Eth, MT, ST, TP, Bil. ExSph	Sphenoid sinus mucosa (FF)	None	Gross total resection	T	T							
9	F	41	L	Follicular lymphoma (G3)	PFS	Yes	o	o				Eth, Max, TP, PS	None	None	(Biopsy)				P					
10	M	46	R	Adenoid cystic carcinoma (pT4aN0M0)	PPF, MNM, Bil.CNC, Bil, EthS, Bil. SS	Yes	o	o				ST, MT, PS, TP, Bil. Eth	None	None	Subtotal resection	T	P							CRT (52G)
11	M	42	R	Cholesterol granuloma	PA	No	o	o				TS, Bil.ExSph	None	None	Complete opening									
12	F	49	R	Chondrosarcoma	PA, Bil. SS, Bil. Cliv	No	o	o	o			TS, TP, Bil. Max and Eth, ExSph	Nasal septum flap (PF)	Dysosmia	Gross total resection		T							
13	F	68	R	Fibrous Meningioma	MCB, ITF	Yes	o	o	o		OZ	Eth, TP, ExSph	None	None	Gross total resection									
14	F	16	R	Optic nerve compression	OC	No	o	o				TS, Eth	Sphenoid sinus mucosa (FF)	None	No improvement									
15	F	50	L	Schwannoma	PFS, ITF, JF	No	NS	NS	NS	NS	NS	Transoral approach	None	None	Gross total resection									
16	F	55	R	Chondrosarcoma	CS, Sella, JF, HGC, SS, PA	No	o	o				PS, TP, Bil. Eth and Max Rt. ExSph	Nasal septum flap (PF), PS-NI(PF)	CN VI palsy	Subtotal resection		T							
17	M	82	R	V2 Schwannoma	MNM, ITF, PPF	Yes	o					Eth, TP	None	None	Gross total resection	P	P							

Supplemental Table 1. Case profiles

Bil., bilateral; Cliv, clivus; CN, cranial nerve; Con., contralateral; Comb., combined; CRT, chemoradiotherapy; CS, cavernous sinus; CNM, common nasal meatus; Eth, complete ethmoidectomy; EthS, ethmoid sinus; ExSph, extended transsphenoidal approach; FF, free flap; HGC, hypoglossal canal; I, inferior; Ipsi., ipsilateral; ITF, infratemporal fossa; JF, jugular foramen; LRSS, lateral recess of sphenoid sinus; M, middle turbinate; Max, maxillectomy; MCB, middle cranial base; MNM, middle nasal meatus; MS, maxillary sinus; MT, middle turbinectomy; NP, nasopharynx; PFS, parapharyngeal space; PS, posterior septectomy; OC, optic canal; OME, otitis media with effusion; OZ, orbitozygomatic approach; PA, petrous apex; P, partial; PF, pedicle flap; PPF, pterygopalatine, fossa; SS, sphenoid sinus; Sella, sella turcica; ST, superior turbinectomy; S, superior turbinate; T, total; TC, transclival approach; TP, transpterygoid approach; TPIP, transpterygoid infrapetrous approach; TS, transsphenoidal approach