

Transient oculomotor nerve palsy after endoscopic sinus surgery

Sir,

Endoscopic sinus surgery (ESS) is well-established as the mainstay of surgical treatment for refractory chronic rhinosinusitis. It is a minimally invasive and mucosa-preserving procedure with little patient morbidity. However, serious ophthalmological complications have been reported, such as orbital hemorrhage, blindness, and extraocular muscle injuries.^[1-3] Oculomotor nerve palsy is extremely rare after ESS, and transient oculomotor nerve palsies after ESS have never been reported. We recently experienced an unusual case of transient oculomotor nerve palsy following ESS for nasal polyposis, thus herein report the case.

A 45-year-old woman underwent bilateral ESS for nasal polyposis. The patient complained of vertical diplopia after ESS. At initial presentation, her best-corrected visual acuities were 20/20 in both eyes (oculus utro [OU]). The anterior segment and media were normal, and funduscopy showed normal optic disc and macula OU. There was no relative afferent pupillary defect. Ophthalmological examination revealed evidence of the right oculomotor nerve palsy, with ptosis, limited adduction, supraduction and infraduction [Fig. 1]. A postoperative computed tomography scan showed a dehiscence of the right lamina papyracea, adjacent to the posterior ethmoid sinus, with a protrusion of soft tissue [Fig. 2]. The patient received systemic dexamethasone (30 mg/day for 2 weeks) for the treatment of her symptoms. Two weeks postoperatively, the ptosis of the right upper lid had completely recovered. She had regained full right ocular motility, with no diplopia [Fig. 3].

The transient nature of our patient's oculomotor nerve palsy is curious. We postulate that the mechanism of oculomotor nerve palsy was focal contusion of the oculomotor nerve by blunt trauma that occurred while performing ethmoidotomy by force. Alternatively, ischemic nerve injury, due to disruption of the nerve's blood supply, may have been caused by the protrusion of soft tissue or the expanding packing in the ethmoid cavity. Extravasation of local anesthetic into the orbit from the sphenopalatine injection can result in transient mydriasis, ophthalmoplegia, and vision loss; however, this is unlikely to have occurred in our patient.

Oculomotor nerve palsy after ESS is a rare but significant complication. Our patient's spontaneous recovery indicates that an initial conservative approach may be appropriate in the absence of fat or muscle entrapment. Surgeons performing ESS must keep in mind the possibility of oculomotor nerve palsy due to blunt trauma, and must perform the whole procedure with great care, especially when operating close to the sphenoid and posterior ethmoid sinus.

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Conflicts of interest

There are no conflicts of interest.

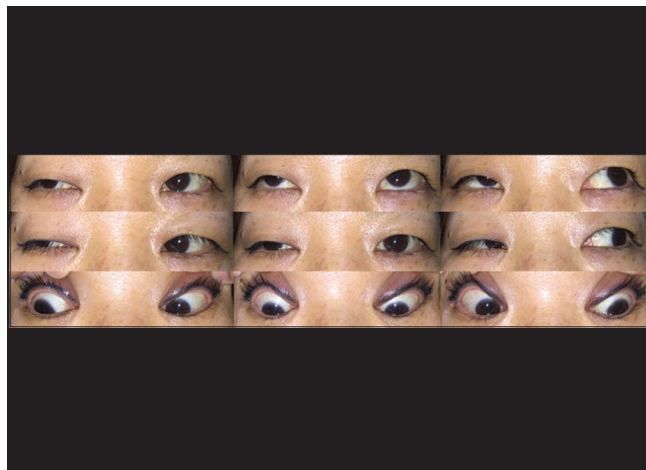


Figure 1: Ptosis and limitation of elevation, depression, and adduction of the right eye consistent with oculomotor nerve palsy

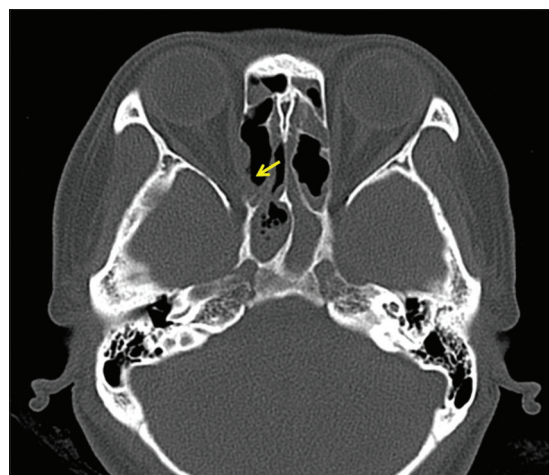


Figure 2: Axial computed tomography scan of the orbit after endoscopic sinus surgery, showing a dehiscence of lamina papyracea adjacent to the posterior ethmoid sinus

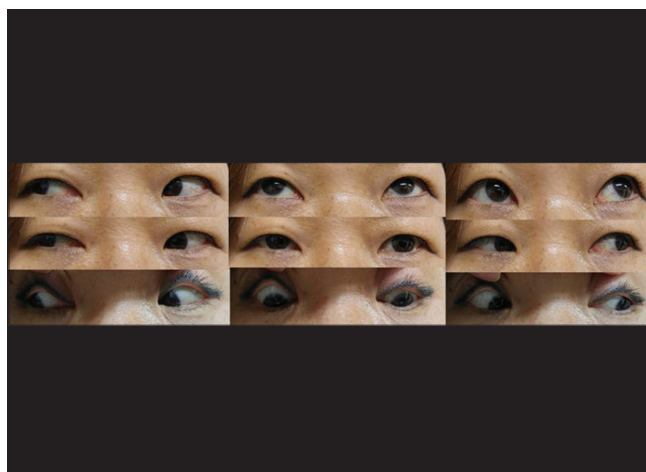


Figure 3: Full recovery of eye movement and ptosis after 2 weeks of dexamethasone treatment

Tae Su Kim*, **Jang Hun Lee^{1*}**, **Moosang Kim¹**

Departments of Otolaryngology and ¹Ophthalmology,
School of Medicine, Kangwon National University,
Kangwon, Chuncheon, Korea

Correspondence to: Prof. Moosang Kim,
Department of Ophthalmology, School of Medicine, Kangwon
National University Hospital, Baengnyeong-ro 156, Kangwon,
Chuncheon 200-722, Korea.
E-mail: kimmoo-79@hanmail.net

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*These authors contributed equally to this work.

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