Benign paroxysmal positional vertigo (BPPV) is a self-limited disease characterized with vertigo and nystagmus existing in certain head positions. As well as occurring idiopathically, it may occur after a head trauma or following a viral labyrinthitis. In this article, a BPPV case seen after a drill-assisted excision of a nasal osteoma is presented.

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ABSTRACT

Benign paroxysmal positional vertigo (BPPV) is a self-limited disease characterized with vertigo and nystagmus existing in certain head positions. As well as occurring idiopathically, it may occur after a head trauma or following a viral labyrinthitis. In this article, a BPPV case seen after a drill-assisted excision of a nasal osteoma is presented.

INTRODUCTION

BPPV was first described by Barany in 1921 as ‘a characteristic vertigo and nystagmus occurring in specific head positions in the absence of cochlear and central nervous system disorder’ and it was thought to be an otolithic dysfunction.¹ BPPV is a common disease and makes up 17% of dizziness cases.² Both sexes are equally susceptible to this disorder. The incidence in Japan was reported to be 10.7-17.3 / 100,000. It's more likely to be seen in 5th decade. In its most common clinical form, the disease is self-limited and heals spontaneously within a few weeks to a month.³ Labyrinthine concussion may play role in BPPV pathogenesis.⁴ The most common form exists while the patient,

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Key Words
Benign paroxysmal positional vertigo
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Nasal Osteom Eksizyonuna Bağlı Benign Paroksismal Pozisyonel Vertigo

Benign paroksismal pozisyonel vertigo belirli baş pozisyonlarında vertigo ve nistagmus oluşmasıyla seyreden, spontan olarak düzelebilen bir tür hastalıklır. İdipatik olarak meydana gelebildiği gibi kafa travmalarını takiben veya viral labirentit sonrası da oluşabilir. Bu makalede tur kullanılarak eksizyonu yapılan bir nasal osteom olgusunda gelişen benign paroksismal pozisyonel vertigo olgusu sunuldu.

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who has no head or ear trauma history, is getting up from bed. Although extremely rare, it is reported to exist in the postoperative period of rhinoplasty. In this report, a BPPV case existing following piecemeal excision of a nasal osteoma with a nasal drill is presented.

CASE REPORT
48-year-old female patient complained of nasal stuffiness on right side, postnasal drip and foul-smelling discharge. In the last 6 months, the symptoms were aggravated. She had a history of a surgical intervention for surgical excision of a right nasal osteoma 20 years ago. Otorhinolaryngologic examination revealed a huge firm solid mass covered with mucosa located above inferior turbinate filling the whole right nasal cavity. Paranasal sinus computerized tomography (CT) sections revealed a compact, well circumscribed, and radio opaque mass in the right nasal passage (Figure 1). Under general anesthesia the patient underwent osteoma excision using endonasal endoscopic technique. Drill was utilized for breaking the tumor into small pieces (Figure 2). The tumor was totally excised and no residual tumor was observed on postoperative CT scans (Figure 3). On postoperative 1st day the patient suffered from nausea and vomiting following head rotation towards right. The patient had neither pre-existing ear disease nor vertigo, and did not suffer from hearing loss and tinnitus. Semont's diagnostic maneuver revealed rotatory nystagmus accompanying vertigo elicited with head rotation to right. Pure-tone audiogram and tympanometric tests were normal. The condition was accepted to be a BPPV resulting from drill usage in the operation. Epley's maneuver was applied on 2nd and 3rd postoperative days and subsequently the complaints disappeared. Vestibular rehabilitation exercises were instructed to the patient. On 15th postoperative day, the patient was completely free of symptoms of BPPV.

DISCUSSION
Dix and Hallpike stated that BPPV was an otolithic organ disease and following criteria were defined; there was a provocative position related to the affected ear, a rotatory or horizonto-rota-
reported BPPV in 47% of 47 longitudinal temporal bone fracture patients; and in 20.8% of 77 head trauma patients. Utricular membrane disruption following head trauma and release of otoconia into endolymph of pars superior is assumed to be the pathophysiologic mechanism of posttraumatic BPPV. Otoconia are irresponsive to gravitational forces and they settle in posterior SCC ampulla. Changes in head position may make the displacement in ampulla difficult. Nigam reported a case of BPPV after excision of a squamous carcinoma from upper jaw. He thought this postoperative complication occurred due to possible labyrinthine trauma. Katsarkas investigated 2523 BPPV patients between 1974 and 1997. He found that 1490 cases were idiopathic whereas 154 were posttraumatic. Bilaterality was more frequent in posttraumatic cases. Kaplan reported a BPPV case in a middle-aged woman during dental implantation. He postulated that osteotomy usage was responsible for this complication. Persichetti, reported a patient in whom postoperative BPPV developed after secondary rhinoplasty. He stated that either osteotomy or head rotation for otogenic cartilage harvesting were responsible. Diagnosis of BPPV with left PSCC cupulolithiasis was made in this patient. Semont's maneuver applied once in 3 weeks was reported to be curative for this patient. Gyo diagnosed BPPV in 7 patients taken into bed rest after various operations between 1980 and 1985. During postoperative care, strict bed rest was thought to be a precipitating factor for the utricle, since head was held in certain positions and this enhanced deposition of precipitates inducing cupulolithiasis. Andaz described a case of BPPV developing on 3rd postoperative day following excision of a left parietal osteoma using a hammer and chisel. She stated that using a hammer and chisel resulted in a sufficient trauma, therefore less traumatic instruments likewise electric or pneumatic drills should be preferred. Kutluhan suggested transnasal approach with drill usage for surgery of totally excisable benign tumors. In our case, electric drill was used for excision of nasal osteoma. BPPV existing on 2nd postoperative day was thought to result from separation of ooliths from otoconial layer of utricular maculae. So, as well as hammer and chisel, drill can apply enough force to cause BPPV. We think that forces applied on anteroposterior plane during surgery or trauma, are more likely to cause BPPV than those in transverse plane. In both cases described by Andaz and Persichetti BPPV was experienced after the application of force.
similarly, on anteroposterior plane.\textsuperscript{3,4} As a conclusion, widespread use of drill in endonasal interventions in recent years may cause BPPV as a complication. Therefore, surgeon must be alert for such a situation in the postoperative follow-up.

\textbf{REFERENCES}


