CASE REPORT

Lobular Capillary Hemangioma of the External Auditory Canal

Murat Sari, MD; Serdar Baylancicek, MD; Funda Eren, MD; and Alper Tutkun, MD

Lobular capillary hemangiomas (LCHs, pyogenic granulomas) are benign, rapidly growing hemorrhagic lesions of unknown origin. Although an LCH is a common pathologic condition that can occur on the head and neck, the external auditory canal is an extremely rare site for the development of this tumor. Surgical resection is curative. We report the case of a 30-year-old woman treated for an LCH of the external auditory canal.

From the Department of Otorhinolaryngology, Head and Neck Surgery, Marmara University School of Medicine, Istanbul, Turkey (M. Sarı, S. Baylançiçek, A. Tutkun); and the Department of Pathology, Marmara University School of Medicine, Istanbul, Turkey (F. Eren)

Correspondence
Murat Sari, MD
Marmara Universitesi Hastanesi
Kulak Burun Bogaz ABD
Tophanelioglu cad. No: 13/15,
34662 Altunizade, Istanbul, Turkey

Phone: + 90 216 5450047
Fax: + 90 216 3269637
E-mail: drmuratsari@yahoo.com

Submitted: 12 April, 2006
Accepted: 08 August, 2006

Mediterr J Otol 2007; 3: 58-61

Lobular capillary hemangiomas (LCHs, pyogenic granulomas) are benign hemorrhagic lesions that frequently originate in the vascular tissues of the skin and mucosa[1]. The underlying cause of these vascular tumors has not been determined, but local trauma and hormonal factors have an etiologic role. An LCH usually presents as a red, soft, sessile or pedunculated mass that bleeds easily on manipulation. Although these tumors are often found in the head and neck region, an LCH of the external auditory canal (EAC) is extremely rare[2]. A recent search of the English literature revealed only 2 cases of an LCH involving the EAC[3,4]. We present what to our knowledge is the third patient with an LCH of the EAC

CASE REPORT

A 30-year-old woman presented with an approximate 2-month history of progressive right-sided hearing loss, aural fullness, and nonpulsatile tinnitus. She had also experienced itching of the EAC for 3 years. This patient denied vertigo, facial symptoms, and external ear trauma. Her medical, surgical, and family histories were unremarkable. She was neither pregnant nor receiving hormonal contraceptive medication.

An otoscopic examination revealed a nonpulsatile purple-reddish mass that filled the right EAC (Figure 1). No discharge or blood was seen on otoscopy. The mass totally obstructed the canal so that the tympanic membrane could not be seen. Rinne and Weber tests at 512 Hz were consistent with a right-sided conductive hearing loss. The results of the patient's vestibular and neurologic examinations and the remainder of the head and neck evaluation, including that of the left ear, were within normal limits. Audiographic testing revealed a right-sided 10- to 40-dB air-bone gap and a moderate conductive hearing loss. A computed tomographic scan of the temporal bone showed a 2-cm soft tissue mass lateral to the tympanic membrane. The ossicles and middle ear were normal in appearance, and there was no evidence of bony destruction.

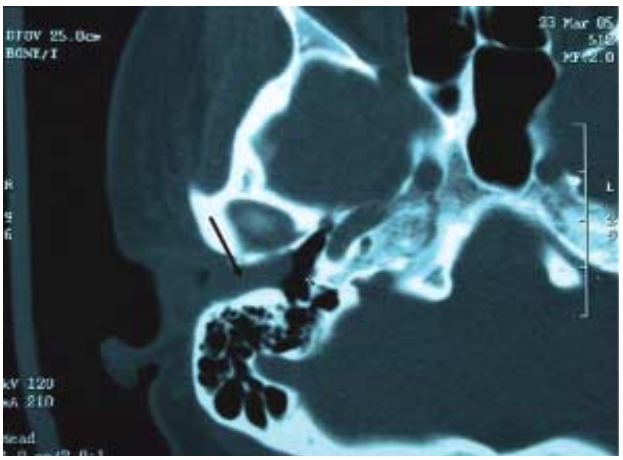

Figure 1: An axial temporal computed tomographic scan reveals a mass in the right external auditory canal. There is no evidence of bony destruction or middle ear disease.

The patient underwent surgery after having received a general anesthetic. Examination in the operating room revealed a smooth pedunculated purple mass that arose from the anteroinferior wall of the EAC. The mass was excised via an endomeatal approach with the cold-knife technique. The pedicle was excised separately. The specimen consisted of a polypoid mass that measured approximately 15 mm (Figure 2). The tympanic membrane was normal in appearance, and no graft material was used in the area of excision. Only gel foam with an antibiotic ointment was applied to the area of excision. Histopathologic examination of the specimen revealed an LCH. Microscopically, the polypoid lesion was covered with squamous epithelium in which an area of focal ulceration was noted. The stroma was composed primarily of capillary proliferation in a lobular configuration and a moderate amount of inflammatory infiltration. Small, fibrous septa surrounded the lobules (Figure 3).

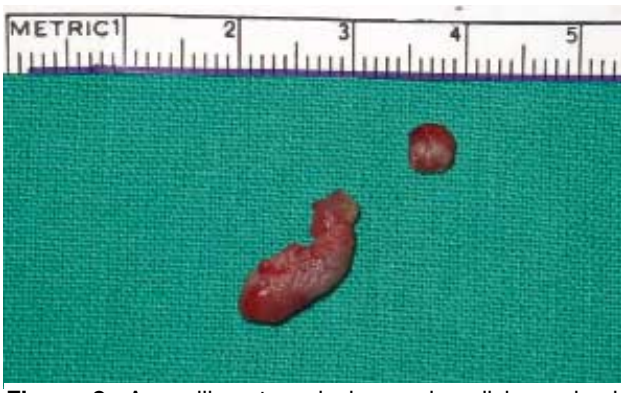

Figure 2: A papillomatous lesion and pedicle excised from the external auditory canal of a 30-year-old woman with chronic itching of the external ear and a brief history of progressive right-sided hearing loss, aural fullness, and nonpulsatile tinnitus.

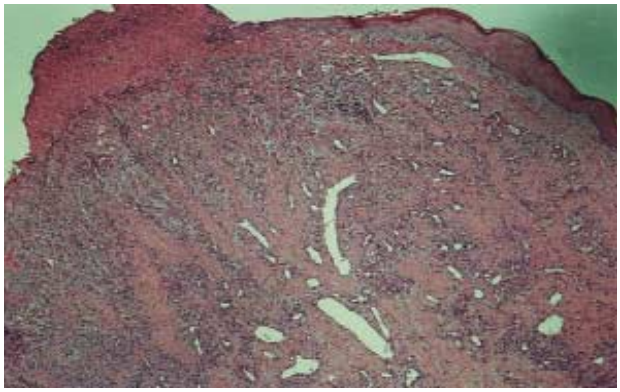

Figure 3: Histopathologic examination shows the lobular arrangement of capillaries. Note the focal ulceration on the surface of the polyp (hematoxylin-eosin stain; original magnification x100).

The patient had an uneventful postoperative recovery. Four months after surgery, she had no complaints, and otoscopic examination revealed a healthy EAC with an intact tympanic membrane. The results of postoperative audiographic testing indicated closure of the air-bone gap and hearing within normal limits.

DISCUSSION

LCH (pyogenic granuloma) is a common polypoid form of capillary hemangioma that occurs on the skin and mucosal surfaces[1]. Pyogenic granuloma was first described by the French surgeons Poncet and Dor in 1897[5]. Hartzell[6] introduced the term "pyogenic granuloma," which is a misnomer because the tumor is neither induced by bacterial infection nor a true granuloma. The underlying cause of LCHs is unclear, but local trauma triggers an exuberant inflammatory response[7]. "Granuloma gravidarum" (tumor of pregnancy) is a term used to describe a pyogenic granuloma that occurs during pregnancy and in which hormonal stimulation exerts a pathogenic effect. These lesions usually occur on the maternal gingiva and regress spontaneously after the birth of the infant[8].

According to an epidemiologic study by Harris and colleagues[2], most LCHs develop during the patient's third decade of life. Mucosal lesions are twice as common in women as in men, but cutaneous LCHs occur slightly more often in men than in women. That finding supports the concept that female hormones are not an etiologic component of the cutaneous form of LCH. In both male and female patients, the most common cutaneous sites for an LCH are the trunk and the extremities, followed by the head and neck. The oral cavity is the most frequently affected mucosal area[2].

Histologically, an LCH presents as a polypoid lobulated mass of newly formed capillary blood vessels surrounded by an edematous stroma. An inflammatory infiltrate is usually present[1]. Although these tumors often occur in the head and neck region, an LCH of the EAC is extremely rare. To our knowledge, only 1 case of pyogenic granuloma of the EAC has been published in the English literature. In that report, a 23-year-old man with a small violaceous papilloma-like lesion within the right EAC was treated by laser excision after having received a local anesthetic. He experienced no treatment-related complications[3]. A search of the literature also revealed that the first granuloma gravidarum of the EAC was reported in 2003 by Courtney and colleagues; the patient was a 27-year-old woman[4]. In our patient, the cause of the LCH may have been frequent scratching to relieve the chronic itching of the external ear over a 3-year period. Local excision of the lesion, which was effective in our patient, is the recommended therapy for LCH.

CONCLUSION

LCH is a benign vascular tumor of unknown origin that may affect the skin or mucosa. Surgical excision is the therapy of choice.

REFERENCES

1. McGill TJI, Forsen JWJ, Mulliken JB. Hemangiomas and vascular anomalies of the head and neck. In: Cummings CW, editor. Pediatric Otolaryngology Head and Neck Surgery. St Louis: Mosby, 1998: 66-80.
2. Harris MN, Desai R, Chuang TY, Hood AF, Mirowski GW. Lobular capillary hemangiomas: An epidemiologic report, with emphasis on cutaneous lesions. J Am Acad Dermatol 2000;42:1012-6.

3. Casler JD, White JD, Montgomery E. Pyogenic granuloma of the external auditory canal. Ear Nose Throat J 1989;68:266-7.
4. Courtney MJ, Koleda CB, Titchener G. Aural granuloma gravidarum. Otolaryngol Head Neck Surg 2003;129:149-51.
5. Poncet A, Dor L. Botryomycose humane. Rev Chir (Paris) 1897;17:996-7.
6. Hartzell MB. Granuloma pyogenicum (botryomycosis of French authors). J Cutan Dis 1904; 22: 520-3.
7. Mills SE, Cooper PH, Fechner RE. Lobular capillary hemangioma: the underlying lesion of pyogenic granuloma. A study of 73 cases from the oral and nasal mucous membranes. Am J Surg Pathol 1980;4:470-9.
8. Daley TD, Nartey NO, Wysocki GP. Pregnancy tumor: an analysis. Oral Surg Oral Med Oral Pathol 1991;72:196-9.