

What's the Cause of a Woman's Recurrent Left-Sided Ear Lesion?

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A 34-year-old woman initially had presented to her primary care physician with an erythematous, swollen lesion on her left ear of 2 week's duration. The physician had aspirated and drained the lesion, only to have it return 1 week later. The patient then had been referred to a dermatologist for further assessment of the lesion.

Physical examination. Upon examination by the dermatologist, the cystic lesion measured approximately 3 cm, extending from the antihelix of the crus to the inferior side of the antitragus of her left ear (**Figure**). The patient had no history of trauma, but the lesion was noted as occurring ipsilateral to the side she carries her 7-month-old infant. Of additional significance was her history of atopic dermatitis involving her body and face. The dermatologist aspirated the reappearing lesion, producing 6 mL of viscous yellow fluid resembling olive oil.



Figure. A 34-year-old woman presented with an erythematous, swollen left-sided lesion extending from the crus of the antihelix to the inferior side of the antitragus, measuring just over 3 cm.

Which of the following is the best diagnosis for this left-sided recurrent ear lesion?

- A. Sebaceous cyst
- B. Auricular pseudocyst
- C. Fibroma
- D. Subperichondrial hematoma
- E. Chondrodermatitis nodularis helicis

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Answer: B, auricular pseudocyst

Auricular pseudocysts, also known as intracartilaginous cysts of the ear or endochondral pseudocysts, are a rare, benign, and usually painless condition involving a cystic swelling of the ear. The cystic lesions usually are asymptomatic, although they can cause mild discomfort and inflammatory signs.^{1,2}

Presentation. The swelling generally develops over 4 to 12 weeks and is due to an intracartilaginous accumulation of viscous fluid that is clear to straw-yellow in color, has an osmolarity similar to that of plasma, and measures from 0.5 to 10.0 mL in volume.¹ Common sites of development include, in descending order, the triangular fossa, the scaphoid fossa, and cymba conchae. Lesions range in size from 1 to 5 cm.

Although they most commonly develop as a right-sided unilateral lesion in men aged 35 to 40 years,^{3,4} pseudocysts of the ear can also be seen in children. Auricular pseudocysts in children are an uncommon finding; children who do develop such lesions are more likely to present with bilateral pseudocysts, compared with adult presentations, which rarely are bilateral.¹ Endochondral pseudocyst of the ear is uncommon among female patients, who account for only 7% of cases.⁵

The exact cause of these lesions is unknown. While most such lesions are idiopathic, predisposing factors include chronic low-grade trauma to the ear, atopic dermatitis, endochondral deformities affecting vascular and lymphatic drainage of the area, or cartilaginous degeneration due to release of chondrocyte lysosomal enzymes.^{1,6}

Treatment. The goals of treatment are complete drainage of the fluid-filled pseudocyst, preservation of the ear's cartilaginous architecture, and prevention of recurrence. If left untreated, the pinna may suffer permanent deformities.⁶

Among the many treatment options are incision and drainage, intralesional corticosteroids, and intralesional sclerosing agents such as minocycline,³ although all of these options tend to have less-favorable outcomes such as recurrence and/or disruption of the auricle architecture.^{2,7}

The consensus is that conservative modalities are the best first-line treatment option since they are the least invasive. Observation for 2 to 3 months is also acceptable initially; this approach has been found to be as beneficial as treatment with intralesional corticosteroids.³

Simple needle aspiration followed by compressive dressing is the most common treatment; minimal complications have been observed but may include thickening of the pinna; the success rate is approximately 57%.³ Individualized treatment plans often combine different therapeutic modalities in order to achieve resolution. Most treatments are followed by injection of corticosteroids or sclerosing agents into the cystic cavity, followed by a local compression dressing such as a clothing button bolster, clip compression dressing, or compression suture therapy.²

The most effective and definitive treatment for recurring pseudocysts of the pinna is surgical deroofing techniques followed by compressive buttoning.² This technique involves resection of the anterior cystic leaflet and has been shown to have the lowest recurrence rate and best cosmetic outcomes.⁶ However, complications may occur, such as thickening of the pinna and perichondral reactions.^{2,6}

Diagnosis. In the interest of the accurate diagnosis of auricular pseudocysts, the levels of the diagnostic markers lactate dehydrogenase isoenzymes 4 and 5 (LDH-4 and LDH-5) have been found to be higher in cystic fluid compared with plasma, whereas LDH-1 and LDH-2 levels are usually higher in serum than in cystic fluid. The LDH isoenzymes may be a main contributing factor in the cartilaginous disruption of cystic formation.⁶ The intracartilaginous cysts lack an epithelial lining, which is a major distinguishing feature in contrast with common differential diagnoses such as sebaceous cyst, fibroma, subperichondrial hematoma, cauliflower ear, relapsing polychondritis, and chondrodermatitis nodularis helices.⁶

Outcome of the case. This patient's history of atopic dermatitis may have predisposed her to the formation of an auricular pseudocyst, given that the lesions may be secondary to repeated minor trauma such as rubbing the auricle to relieve the discomfort of atopic dermatitis.

In addition to the rarity of the condition occurring in a female patient, a unique aspect of this case was the left-sided location of the pseudocyst. Based on the patient's history, it appears that she is left-side dominant, which may support the observation of pseudocysts occurring on the dominant side of those affected.

After the dermatologist aspirated 6 mL of fluid from the lesion, the patient was referred to an

otorhinolaryngologist and underwent surgical deroofting with compressive buttoning. The patient has done well since the procedure and has not experienced any pseudocyst recurrence or thickening or deformity of the pinna.

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