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IP Indian Journal of Clinical and Experimental Dermatology

Journal homepage: [www.ijced.org/](http://www.ijced.org/)

## Case Report

# Comedones in concha of ear treated with pen punching technique

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### ARTICLE INFO

#### Article history:

Received 27-05-2023

Accepted 06-06-2023

Available online 03-07-2023

#### Keywords:

Comedones

Pen punching

Comedone extraction

Concha of ear

### ABSTRACT

Comedones occur in a variety of skin conditions especially on the face. Comedone extraction using an instrument called comedone extractor is a commonly employed technique to remove them. Comedones may however be present in uncommon sites such as concha of ear. Using comedone extractor in concha of the ear is difficult as it is deep and the the surface is firm. It may also cause injury to the patient. In such situations, 'pen punching technique', first described in 2015 may be employed to extract comedones easily. We describe a case of a 23-year-old girl with comedones on the concha of both ears which we removed using this technique.

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## 1. Introduction

Comedones occur due to the plugging of pilosebaceous follicles with sebum and keratin. They occur commonly on the face, upper back and chest. Comedone extraction using comedone extractor is a simple office procedure which is commonly employed to remove comedones, both microcomedones and macrocomedonal lesions (defined as comedones greater than 1mm in size).<sup>1</sup> Uncommonly, comedones may occur in the concha of the ear, during which time, extracting comedones using comedone extractor becomes challenging. Hence an easier technique of removing comedones using pen can be employed. We describe a case of a 23-year-old girl with comedones on concha of both ears, which we removed using pen punching technique.<sup>1</sup>

## 2. Case Report

A 23-year-old girl presented multiple asymptomatic blackish raised lesions over concha of both ears since 10

years. It started initially as a single lesion and gradually increased in number over a period of 10 years. There was no history of similar lesions elsewhere in the body. During these 10 years patient tried to remove these lesions on her own using safety pin, without much success. On examination there were multiple open comedones in the concha of both ears with 3 in right ear (concha and cymba concha) as in Figure 1 and 6 comedones in left ear (concha and cymba concha) as shown in Figure 2. There was also a tender swelling over incisura intertragica of right ear (Figure 1) which was diagnosed as furuncle by ENT surgeons. comedone extraction was done using pen punching technique (Figures 3 and 4). All the comedones on left ear were extracted (Figure 5). Right ear lesions were not dealt with, because of the furuncle. Patient was given systemic and topical antibiotics following the procedure, to take care of the furuncle. She was asked to follow up after 7 days to look for subsidence of furuncle in right ear, so that comedone extraction can be planned in the right ear as well.

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**Fig. 1:** Comedones in concha and cymba concha. Arrow showing furuncle on incisura intertragica of right ear



**Fig. 4:** White arrows showing comedones getting extracted out



**Fig. 2:** Comedones in concha and cymba concha of left ear



**Fig. 5:** Left ear after the removal of all the comedones



**Fig. 3:** Pen punching technique

### 3. Discussion

Comedones are of two types - open comedones (black head) and closed comedones (white head). Open comedones occur due to plugging of pilosebaceous orifice by sebum on the skin surface. Closed comedones occur due to keratin and sebum plugging the pilosebaceous orifice beneath the skin surface.<sup>2</sup> Conditions that present with comedones include acne vulgaris, nevus comedonicus, familial dyskeratotic comedones and senile comedones (Favre-Racouchot syndrome).<sup>3,4</sup> Comedone-like lesions can be seen in Nevus comedonicus which is a rare hamartoma of the pilosebaceous unit.<sup>5</sup>

'Pen punching technique' is a simple procedure to extract comedones, 1<sup>st</sup> described by Ashique KT et al.<sup>6</sup> In this procedure, the entire ear including concha and ear lobe is cleaned with povidone iodine. The earlobe is pulled upward and outward. The refill of a ball pen is removed. The pen is sterilised using spirit, following which the rim of the tip of the pen is used to punch the comedones. The plug of keratin and sebum pops out, which is then removed with the help of

a blunt forceps. One by one, all the lesions are removed. The advantages of this technique are that no special instrument is necessary for the procedure, less chances of injury with the blunt margin of the pen tip and the patient will feel comfortable as there are no specialised instruments being used for the procedure.

In our case, the patient had consulted several Doctors over the years and was treated unsuccessfully. The patient later had tried removing the lesions on her own which had resulted in furuncle at the incisura intertragica of the right ear. For this reason, comedone extraction was not performed on the right ear. Following the procedure the patient was treated with systemic antibiotics, anti-inflammatory agents and topical antibiotics. She was asked to follow up after 1 week to look for resolution of the infection in the right ear concha so that comedone extraction in this ear could be planned.

#### 4. Conclusion

Pen punching technique is a recently described procedure to extract comedones from difficult to reach areas like concha of ears. With this case report we intend to create awareness among Dermatologists who may not be aware of this technique and they may employ this simple procedure in their clinical practice in appropriate case scenarios.

#### 5. Conflict of Interest

None.

#### 6. Source of Funding

None.

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**Cite this article:** Devaraj Y, Rudraiah N, Ajay A, Krishnappa H. Comedones in concha of ear treated with pen punching technique. *IP Indian J Clin Exp Dermatol* 2023;9(2):113-115.