

A rare case of solitary trichoepithelioma treated with carbon dioxide laser

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ABSTRACT

Trichoepithelioma (TE) is a benign skin neoplasm derived from the hair follicle. It is commonly located on the face and hairy skin. We report a rare and interesting case of a solitary trichoepithelioma (sTE) treated with a carbon dioxide laser. This report shows a positive therapeutic effect of a carbon dioxide laser on a patient with sTE located on the medial angle of the eye region. The carbon dioxide laser may be one of the therapeutic options in the case of sTE.

Key words: Solitary trichoepithelioma, Benign skin neoplasm, Carbon dioxide laser

Abbreviations: TE: Trichoepithelioma; sTE: Solitary trichoepithelioma; BCC: Basal cell carcinoma

INTRODUCTION

Trichoepithelioma (TE) is a benign skin neoplasm derived from the hair follicle. It is commonly located on the face and hairy skin. Malignant transformation is quite rare. TE affects adults and more frequently women. The most common presentations are noted in the 4th decade [1]. There are three variants of TE: solitary TE, multiple TE and desmoplastic TE [2-4]. The solitary TE is non-familial. The multiple TE is familial. The gene for the development of familial trichoepithelioma encodes of chromosome 9 [5]. We report a rare and interesting case of solitary trichoepithelioma (sTE) treated with carbon dioxide laser.

CASE REPORT

We present the case of a 47-year-old female patient, who was hospitalized in January 2009, for the presence of a skin tumor, 2 cm in diameter, brownish color, asymptomatic, located on the medial angle of the eye

region (Fig. 1). The patient had past surgical history. The tumor appeared two years ago and it was gradually increasing in size. The patient was treated by surgery. Twice she had undergone ineffective surgical excisions (March 2007 and September 2008). A biopsy initially found nodular basal cell carcinoma (BCC).

There was no significant family history. The patient's medical history included hypertension. Systemic examination and a general physical revealed no abnormality. Results of a routine laboratory studies were normal. During hospitalization, we performed a tumor biopsy. The histopathological examination, using Hematoxylin and Eosin (H+E)-stained paraffin cross-sections, showed microscopic structure of trichoepithelioma (Fig. 2). According to medical history, clinical features and histopathologic findings, a diagnosis of solitary trichoepithelioma (sTE) was made. We decided to avoid surgical procedures. The patient was treated with 10,600 - nm carbon dioxide laser CO₂ excision. We performed two procedures with 3 weeks interval. Pretreatment anesthesia of 1% lidocaine was

How to cite this article: Borowska K, Borzęcki A, Szponar-Bojda A, Raszewska-Famielec M. A rare case of solitary trichoepithelioma treated with carbon dioxide laser. Our Dermatol Online. 2016;7(3):299-301.

Submission: 03.03.2016; **Acceptance:** 11.04.2016

DOI: 10.7241/ourd.20163.80

used. The tolerance of the treatment was very good with a total absence of clinical adverse events (Fig. 3). This complete remission was maintained after 7 years of follow-up.



Figure 1: The patient before treatment.

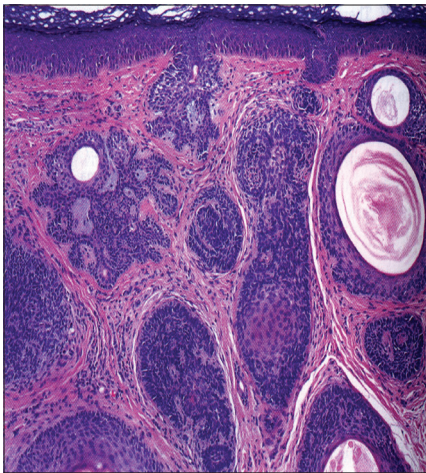


Figure 2: Microscopic picture of trichoepithelioma, H+E staining, 100x.

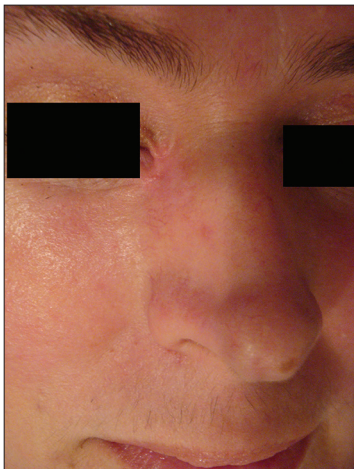


Figure 3: The patient after treatment.

Prior to the study, patient gave written consent to the examination and biopsy after having been informed about the procedure.

DISCUSSION

Trichoepithelioma (TE) was first described by Brooke as epithelioma adenoides cysticum, in 1892 [6]. Differential diagnosis for TE includes BCC. It is important to accurately differentiate between the two neoplasms. In certain cases, it may be difficult to clinically distinguish TE and BCC, particularly solitary trichoepithelioma (sTE). The distinction between BCC and TE on a histopathological basis is also quite difficult. BCC is the most prevalent cutaneous tumor. In contrast to BCC, TE is a benign tumor with clear follicular differentiation. This case highlights the importance of recognizing the solitary trichoepithelioma. The carbon dioxide laser is the most versatile laser used in the treatment of cutaneous tumors. The carbon dioxide laser constitutes an alternative to surgery in the treatment of large solitary nasal tip trichoepithelioma [7] and multiple trichoepithelioma [8,9]. This report shows a positive therapeutic effect of carbon dioxide laser on a patient with solitary trichoepithelioma located on the medial angle of eye region. Treatment option for patients with TE is treatment with carbon dioxide laser. It gives excellent cosmetic result and a high degree of satisfaction among treated patients. The carbon dioxide laser may be one of the therapeutic options in the case of solitary trichoepithelioma.

Consent

The examination of the patient was conducted according to the Declaration of Helsinki principles.

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Source of Support: Nil, **Conflict of Interest:** None declared.