

“Fordyce Spot – Masking Strategy”

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Abstract

Skin is considered to be one of the largest organs of the human body. among various components, it contains sebaceous glands whose primary function is to secrete sebum. It is basically a mechanism for lubricating the skin. the oil produced is a mixture of triglycerides and fatty acid products besides some esters. The secretion makes the surface of the skin impervious to the moisture. Fordyce spots are heterotopic sebaceous glands that can be found on vermilion border of the lips. This article presents a unique case of fordyce spot of vermilion border of the maxillary and mandibular lip along with associated lesions on the surface of the penis and scrotum. The patient was looking for getting a single crown in relation to maxillary right central incisor which was endodontically treated. The patient failed to report for the treatment. diagnosis of fordyce spots was based on history and clinical findings although confirmation of such cases is based on histopathological findings.

Keywords: Sebaceous glands, penile warts, skin, sebum, acne

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Date of Acceptance: 08/08/2021

Introduction

The sebaceous glands are exocrine glands found in the skin (except the palms of the hands and soles of feet), whose function is to secrete sebum, that lubricates the skin and helps to keep it waterproof. Fordyce spots, first described by John Addison Fordyce in 1896 are heterotopic sebaceous glands that can occur on the vermilion border of the lips but within the oral mucosa. ¹ They can also occur on ventral surface of penis, scrotum, areola and labia minora. ² These spots, however, differ from sebaceous glands in that they lack association with a hair follicle and open directly on surface. Their incidence in neonates is seen approximately about 1% and are related to the effects of maternal androgens. ³ In adults, the pubertal stimulation associated with hormones brings in enlargement of sebaceous glands thus producing

Fordyce spots. The lesion in adults is benign, self-limiting and requires no intervention, although treatment with carbon dioxide laser, ⁴ has been found effective. The lip lesions appear as yellow to yellow – white or brown papules that occur bilaterally occasionally resulting in plaque formation when they coalesce. They are a striking feature on the face that is when they impair the cosmetic appearance of a person. This article presents a case of a young male patient with Fordyce spot which masked a single metal, ceramic crown whose shade did not match natural adjacent teeth.

Case Report

A young male patient aged 32 years old reported to the department of Prosthodontics, with a chief complaint of replacement of the existing single crown since it did not match the shade of other teeth. Medical history was non-contributory,

however patient disclosed that he had developed brown spots on his lips some ten to twelve years back. History revealed that he had developed similar lesions on the

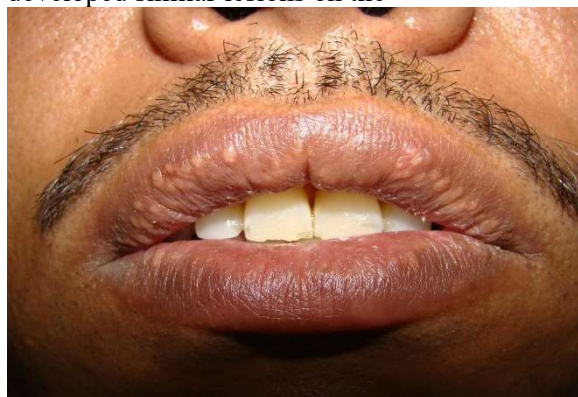


Figure 1: Multiple papule like lesions seen on the partially keratinized oral mucosa.



Figure 2: Fordyce spots on the ventral surface of the penis.

penis, although he noticed them after many years of observing the oral lesions. Dental history included fairly good oral hygiene maintenance habits with no history of decay or mobility of any tooth. The patient had undergone endodontic treatment of maxillary right central incisor about one year back, following which he had got a crown made on the same tooth. The tooth had suffered trauma following which there was abscess formation. Extra oral examination revealed incompetent lips, with maxillary short lip, lower lip averted, prominent mento-labial sulcus, hypertonic lips that demonstrated excess exposure of maxillary anterior teeth (Fig 1). Both maxillary and mandibular lips had multiple pale-yellow brown multiple papules ranging from 0.5 to 2 mm in diameter. The papules were distinctly separated at most of the places while coalescing in some areas. General body examination revealed presence of same spots on the skin of the ventral surface of the penis

extending throughout the body of the penis on both corpus spongiosum and corpora cavernosa (Fig 2). Intra oral examination did not reveal presence of similar spots, oral mucosa had normal clinical features while the only negative feature of natural dentition was a heat cure acrylic crown in relation to right maxillary central incisor. Treatment plan presented to the patient was replacement of the temporary crown with a definitive metal ceramic crown.

Discussion

Fordyce spots are benign lesions representing ectopic sebaceous glands and can be confused with angiokeratomas of fordyce (more reddish, different etiology).^{5,6} the clinical features of this patient were similar to those reported in the literature. Histologically, the Fordyce spots show normal sebaceous glands that consist grouped mature lobes that surround small ducts which emerge at the surface of the epithelium.⁷ Treatment with carbon dioxide laser has been shown to very effective since the procedure minimizes edema and postoperative pain while causing ablation, tissue vaporization and hemostasis during surgical procedure itself.^{8,9} Since cases like the one present in this article do not require any treatment or more appropriately the patients do not seek treatment for such cases, we reviewed the literature to find about how such cases were managed in the past. They are principally based on two principles: principles of masking or blending and the principle of causing/creating distraction (Table 1). Both of these principles were practiced by many emperors. Emperor Hadrian (76-138 CE), used to mask his facial scars by the help of wearing a beard and distracting through curly hair (likely beard was also curled).^{10,11} Remaining clean shaven increases the background contrast for fordyce spots thus making them very prominent. In our case, the patient's skin color was dark brown while the Fordyce spots on the lips were pale yellow, which were striking at the first look on the patient. A thick moustache with hair falling vertically down can hide the Fordyce spots on the mucocutaneous junction. Use of lip polish over entire lip creates a uniform reflection in the observer's eyes, thus masking the color difference present on the surface of the lip. Skin tanning using creams (rapid tan, quick tan, tanorama) features dihydroxyacetone which

is a colorless substance that turns the skin dark brown.

The strategy of distraction is based on the principal of not attracting observer attention by creating a distraction near the area of attraction e.g. wearing a head wear among people who generally are not used to see people like that. Other distractors are listed in table 1 and are quite effective historically.¹²⁻¹⁵

Conclusion

Fordyce spots have neither been reported to be associated with any systemic disease, nor have been reported to undergo malignant transformation which makes them a normal variation of ectopic sebaceous glands. Since they impact the facial aesthetics of a person, a masking strategy is advised as mentioned in this article. The effectiveness of such measures needs to be determined through research.

Acknowledgement

The authors would like to acknowledge the staff of the department of oral medicine and radiology for their valuable clinical opinion.

Table 1: Masking strategy for prominent Fordyce spots¹²⁻¹⁵

Principle of Masking/Blending	Principle of Distraction
<ul style="list-style-type: none"> • Beard – clipped, plucked or curled • Moustache • Lip Polish – plain olive oil • Tanning 	<ul style="list-style-type: none"> • Distinctive hairstyle as detractors • Hair dyes • Noticeable Jewellery – nasal pin, necklace of neck chain • Shoe wear, dress, head wear • Neck, facial tattooing • Piercing – nose, ear

Conflict of Interest: None

Source of support: Nil

Ethical Permission: Obtained

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