

## A Case of Fordyce's Disease with Wide Distribution

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Fordyce's disease is a condition known as ectopically located sebaceous glands on the vermilion borders of the lips and oral mucosa. Clinically, it is groups of minute, yellowish, globoid macules and papules. Histologically, it is characterized by sebaceous glands not associated with hair follicles. We report on a 40-year-old man with Fordyce's disease showing particularly wide distribution on the buccal mucosa and upper lip. (*Ann Dermatol* 13(2) 123~125, 2001).

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**Key Words :** Fordyce's disease, Wide distribution

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Since Fordyce described the occurrence of whitish spots on the oral mucosa and on the vermilion border of the lips in 1896, further cases were described and the condition was known as Fordyce's disease<sup>1</sup>. Clinically, the lesions are groups of minute, yellowish globoid macules and papules on the vermilion border of the lips or on the oral, particularly the buccal mucosa. Histologically, each globoid lesion consists of a group of small but mature sebaceous lobules situated around a small sebaceous duct leading to the surface epithelium<sup>2</sup>.

Here we describe a case of Fordyce's disease, which shows typical clinical and histopathological features and particularly wide distribution.

### CASE REPORT

A 40-year-old man presented asymptomatic, yellowish grouped papules on the upper lip and both buccal mucosae with symmetric and wide distribution (Fig. 1).

They had started to develop on the lip when he was 38 years old, and gradually progressed to entire buccal mucosa. The lesion was so extensive that it almost occupied the entire buccal mucosa. In places, the papules of 1-3mm in diameter were diffusely distributed or coalesced to form plaques. A biopsy from a yellowish papule on the buccal mucosa was taken, and the histopathologic examination showed that a group of small but mature sebaceous lobules in the submucosa was not associated with hair follicle (Fig. 2A,B). The lobules of mature sebaceous glands were situated around a sebaceous duct that opens to the mucous epithelium.

Fordyce's disease was diagnosed from the typical clinical and histologic findings. We treated the vermilion border lesion with CO<sub>2</sub> laser because of the cosmetic problem.

### DISCUSSION

Also known as Fordyce's condition, Fordyce's spots or Fordyce's granules, Fordyce's disease was described by Kolliker as early as 1851 as "aggregations of sebaceous glands within the oral cavity" and in 1896, Fordyce is given credit for first describing the condition<sup>3</sup>. Fordyce's disease is a condition known as ectopically located sebaceous glands on the vermilion borders of the lips and oral mucosa.

The pathogenesis of Fordyce's disease is uncertain, but several theories have been described. These small yellow papules were thought to represent degenerative

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changes in the epithelium of the mucosa<sup>4</sup>. Or their occurrence has been partially explained on an embryologic basis. In the development of the oral cavity the portions of ectoderm lying in the line of fusion of the maxillary processes disintegrate, but the ectoderm lying medial to the line of fusion, i.e., within the oral cavity, persists along with its sebaceous appendages<sup>3</sup>. In most cases, Fordyce's spots on the oral mucosa are noticed incidentally, or have been recorded as a result of demographic studies of oral disease. The prevalence in children is 1-2 per 1000 population<sup>5</sup>, but in adults

they may be present in over 80% of individuals<sup>6,7</sup>. There are increases in size and numbers of glands associated with the onset of puberty and at age 35 to 55, especially in males, and associated with the onset of the menopause in women, suggesting a hormonal dependency for their development<sup>8</sup>.

Fordyce's spots are clinically characterized by isolated or clustered macules and papules with a granular surface covered by intact mucous membrane. Their color can be yellow, white or gray, and their size may vary from single papule of less than 1mm to large patches of glands several centimeters across. They communicate with the oral cavity through ducts from which sebum sometimes can be expressed<sup>3</sup>. There are many similarities between ectopic sebaceous glands and normal sebaceous glands.

The only differentiating clinical features are the transparency at the ectopic glands (they are covered by the a very thin epithelial layer), and the association with hair follicles at the normal sebaceous glands<sup>9</sup>. In our case the lesion developed on the upper lip and both buccal mucosae with symmetric and wide distribution.

Areas of Fordyce's spots on buccal mucosa could be mistaken in diagnosis for any of several keratotic lesions as lichen planus, leukoplakia, carcinoma in situ, and squamous cell carcinoma. So, it is important that physicians diagnose them and reassure the patient about the disease.

**Figure 1.** Groups of minute, yellow, globoid macules and papules on the buccal mucosa with wide distribution.

**Figure 2.** Histopathologic examination of the yellowish papule on the buccal mucosa showed mature sebaceous lobules within the superficial dermis, situated around a small sebaceous duct leading to the surface epithelium ((A) H&E,  $\times 40$ , (B)  $\times 200$ ).

Histologically, the glands appear to be normal functioning sebaceous glands, not associated with hair follicles. They are located in the superficial dermis of the mucous membrane. Serial sections can show stratified squamous epithelium-lined ducts communicating with the surface<sup>2</sup>. In this case, the lobules of mature sebaceous glands were situated around a sebaceous duct that opens to the mucous epithelium.

Our case was diagnosed as Fordyce's disease with wide distribution from the typical clinical and histologic findings.

Fordyce's spots are totally benign, although the occasional patient or physician becomes concerned about them or misdiagnoses them as thrush or lichen planus. No treatment is indicated, other than reassurance. The spots may become less prominent if isotretinoin is given<sup>10</sup>. So, we reassured our patient that his disease is totally benign and treated the vermilion border lesion with CO<sub>2</sub> laser because of the cosmetic problem.

Our case is a Fordyce's disease on the vermilion border of upper lip and the buccal mucosa and is unusual in that the lesion was so extensive as to occupy almost the entire buccal mucosa.

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