PREVALENCE OF FORDYCE'S GRANULES — A KARACHI SAMPLE

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ABSTRACT

The aim of this study was to determine the prevalence of Fordyce's granules in patients attending the Oral diagnosis department of Dental Hospital of Sir Syed College of Medical Sciences for Girls, Karachi, Pakistan. A total of 257 patients (176 males and 81 females) of 17-85 year old were examined clinically. Out of 257 patients, 131 had Fordyce's granules in different sites of oral cavity. Prevalence of Fordyce's granules was high in male patients (57%) as compared to female patients (37%). Age wise high prevalence was observed in patients who were more than 20 years old. High prevalence of Fordyce's granules was also observed in 3rd and 4th decades in males and 4th and 5th decades in females. Buccal mucosa (61%) was found to be the most common site of Fordyce's granules followed by upper lip, retromolar area, lower lip, vermilion border and gingiva. A significant difference in prevalence was found between males and females.

Key Words: White patch, ectopic sebaceous glands, Fordyces granules.

INTRODUCTION

Fordyce's granules are ectopic sebaceous glands which are seen in the oral cavity as small, painless, raised, yellowish or white spots of 1 to 3 mm in diameter.¹ The common site for occurrence of Fordyce's granules has been suggested as vermillion border and lips (Fig 1).² On the other hand buccal mucosa particularly inside the commisures and retromolar region has also been suggested as common site (Fig 1). They may also appear on the scrotum, shaft of the penis or on the labia.¹

There are considerable controversies as to the prevalence of Fordyce's granules in the oral cavity. It is estimated that about 80% of people have oral Fordyce's spots but rarely are granules found in large numbers. They are not usually noticeable in children, and appear in later adulthood.² On the contrary few studies have shown that most patients are in their early or middle

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adulthood.³ They are more prominent in males.² Various studies reported no significant difference in the prevalence between males and females.⁴

Genetic link has been suggested to be aetiologically relevant in Fordyce's granules.³ Similarly it has been suggested that these granules have idiopathic aetiology and they are not known to be associated with any disease or illness and are of cosmetic concern only.⁵ While, some authorities are of the belief that Fordyce's spots are also seen in some rheumatic disorders and in hereditary non-polyposis colorectal cancer syndrome.⁶

In most cases clinical features are characteristic enough to diagnose Fordyces spots easily without histopathological examination.⁷ While a benign finding, treatment may be sought by patients who have prominent Fordyce spots for improved appearance. There are few beneficial treatment approaches reported, including CO_2 laser ablation and oral isotretinoin.⁷ Treatment with 5-aminolevulinic acid (ALA) photodynamic therapy has recently been reported to produce poor outcomes with significant side effects.⁹ On the other hand electrodessication and gentle curettage, is a widely available, safe, and well-tolerated treatment modality.¹⁰

Despite the rising awareness of such change, many clinicians continue to believe that Fordyces spots have significant difference in the prevalence. There is thus a need to determine the occurrence of Fordyce's granules.

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METHODOLOGY

This cross sectional study was done on 257 patients attending the oral diagnosis department of dental hospital of Sir Syed College of Medical Sciences (SSCMS) for Girls from October 2014 to December 2014. Ethical approval was obtained from ethics committee of Dental section of SSCMS and written informed consent was also obtained from all the patients. The sample consisted of 131 patients of both genders diagnosed with Fordyce's granules from 17 to 85 years old. The examination was performed by a single calibrated examiner using mouth mirror under adequate illumination. Anatomic sites such as upper and lower lips, buccal mucosa, vermilion border, retromolar area and gingiva were clinically examined for Fordyce's granules. The collected data were analyzed by SPPS software 17 version, using chi square test and a value of p<0.05 was regarded as significant.

RESULTS

This present study comprised of patients with a mean age of 42.2 years. Distribution of Fordyce's granules were observed in both genders shown in Table 1 and it was found that male patients(57%) had more prevalence than female (37\%). A significant difference



Fig 1: Multiple pin sized yellowish spots on upper lip and buccal mucosa



Age (years)

Fig 1: Distribution of 131 patients by gender and age (in years)

Gender	Patients with Fordyce's granules	Patients without fordyce's granules	P- value
Male (176)	101(57%)	75(42%)	0.002^{*}
Female (81)	30(37%)	51(62%)	

TABLE 2: PREVALENCE OF FORDYCE'S GRANULES ACCORDING TO AGE GROUPS. STATISTICALLY SIGNIFICANT*

Age in years	Patients with Fordyce's granules	Patients without fordyce's granules	P- value
< 20 years (55)	8(14%)	47(85%)	0.000*
> 20 years (202)	123(60%)	79(39%)	

TABLE 3: DISTRIBUTION OF FODYCE'S GRANULES ACCORDING TO SITES

Sites	Fordyce's granules
Upper Lip	27(20%)
Unilateral	18
Bilateral	9
Lower Lip	8(6%)
Unilateral	6
Bilateral	2
Buccal mucosa	80(61%)
Unilateral	36
Bilateral	44
Vermilion border	2(1.5%)
Unilateral	1
Bilateral	1
Retromolar area	13(10%)
Unilateral	9
Bilateral	4
Gingiva	1(0.76%)
Unilateral	1
Bilateral	0

was found in the prevalence of fordyce's granules among male and female patients (p<0.05).

Table 2: Fordyce's granules were most commonly observed in patients of more than 20 years of age (60%)

as compared to patients less than or equal to 20 years old (14%) (p<0.05). Fig 1 shows the high prevalence of Fordyce's granules in 3rd and 4th decades in males whereas in females the prevalence was high in 4th and 5th decades.

DISCUSSION

Fordyce granules are referred to as benign sebaceous glands, which are ectopic in distribution and are characterized by the multiple light yellow raise papules, occurring mainly in the lip region, buccal mucosa, vermillion border, and retromolar region.¹¹ In this study, 61% fordyce's granules were found on buccal mucosa followed by 20 % on upper lip, 10% on retromolar area, 6% on lower lip, 1.5% on vermilion border and 0.76% on gingiva. Previous studies reported Fordyce's granules are not usually visible in children, and tend to appear at about age 3, then during puberty and become more obvious in later adulthood.² Some studies reported they are more prominent in males.³ Similarly in this study Fordyce's granules were predominant in males and high prevalence of Fordyce's granules was seen in 3rd and 4th decades in males whereas in females the prevalence was high in 4th and 5th decades. They are not associated with any disease or illness, nor are they infectious but rather they represent a natural occurrence on the body.⁵ Normally, sebaceous glands are only found in association with a hair follicle. They appear to be more obvious in people with greasy skin types, with some rheumatic disorders, and in hereditary non polyposis colorectal cancer.⁶ Oral Fordyce's granules are usually not biopsied because they are readily diagnosed clinically. No treatment is required for Fordyce's granules, unless the individual has cosmetic concerns. Vaporising laser treatments such as CO₂ laser⁵ or electro desiccation have been used with some success in diminishing the appearance of this condition if they are of cosmetic concern. Many clinicians consider this a normal physiological phenomenon and advise against any treatment. $^{\rm 12}$

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