

Original Research Article

Gingival Tissue Status and the Patients' Satisfaction on Anterior Labial Gingival Color Among Yemeni Patients in Abha City of Saudi Arabia

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Abstract: Gingival pigmentation is a change of gingival color due to different factors, lesions and conditions. Clinical discoloration of gingival is considered as medical problem (disease or patient esthetic concern); although the most of gingival discoloration is mainly physiology due to melanin deposition. The aim of the present study is designed to evaluate the gingival tissue status and the patients' satisfaction on anterior labial gingival color among Yemeni patients in Abha city of Saudi Arabia. Four hundred Yemeni patients were selected randomly out of the patients who visit the clinics, college of dentistry king Khalid university, They do not receive any periodontal treatment since at least six months and they are divided according to their gender into two equal groups. Oral hygiene status by plaque index (PLI) assessment and gingival index (GI) assessment were recorded. A questionnaire was used for data collection. The questionnaire consists of questions including sex, age, and level of education, and satisfaction with gingival and dental appearance. Data were entered and analyzed by frequency and percentages. There were significance differences in oral hygiene, plaque index and dental appearance satisfaction between males and females patients. The oral hygiene in female samples is better than males samples in the present study and the severity of gingival inflammation was more in males than females whereas the dental appearance and gingival color satisfaction were more in males than females patients. Almost the males patients in this study were satisfied of gingival and teeth appearance more than females. There were negative effects of teeth color, teeth protrusion and fillings on satisfaction of the patients.

Keywords: Gingival status, Patients' satisfaction, Yemeni patients

INTRODUCTION

Esthetics is an important in periodontal treatment and the dentist has some difficulties to establish satisfying gingival appearance. Oral mucosa pigmentation occurs due to internal and external factors [1] this pigmentation is primary pigmentation by oxy hemoglobin, melanoid, carotene, melanin and reduced hemoglobin [2]. It occurs clinically as multifocal or diffuse physiological pigmentation in variety ethnics [3].

Some systemic factors are considered as etiologic factors of gingival dark or brown pigmentation. These factors are either systemic disorders (endocrine disturbance, Albright's syndrome, malignant melanoma, Peutz-jeghers syndrome, hemochromatosis, Addison's syndrome and von Recklinghausen's disease), Kaposi sarcoma, melanoacanthoma, nevus, genetic factors, and heavy metals (silver, bismuth, mercury, lead), or local factor e.g. tobacco use, amalgam tattoo and zidovudine [4], but melanin is endogenous non hemoglobin pigment

produced in basal layer by melanocytes in the epithelium [5]. These cells have clear cytoplasm and rounded nucleus [6].

In the oral mucosa the number of melanocytes coincides their numbers in the skin and their production but presents some incentive factors e.g. medication, trauma and radiation can increase melanin secretion [7]. If the patient complaint is dark gingiva as esthetic concern due to melanin pigmentation, this is not considered as a medical problem [8] this gingival pigmentation is normal in African, Spanish and some Asian peoples [9] and it is found in other strains especially in the fair skin peoples where the melanocytes are present within the gingival epithelium but they are not active [10].

Gingival pigmentation is described by Ginwalla *et al.* [11] as "unsightly" and proposed its correction and more patients have been requested to remove of this pigmentation as esthetic concern. To detect the patient idea about gingival pigmentation see him "pink gum" is

the normal color of the gingival. The present study was designed to evaluate the gingival tissue status and the patients' satisfaction on anterior labial gingival color among Yemeni patients in Abha city of Saudi Arabia.

SUBJECTS AND METHODS

Patients samples

Our study was carried out on four hundred (200 males & 200 females) Yemeni patients who regularly visit the clinic of college of dentistry King Khalid University. All patients were adults without any visual problems and they had not received any periodontal treatment since six months ago and they selected randomly from Yemeni patients in Abha city. Then the data were collected by interviewer guided questionnaire (Table 1).

Different questions were included in this questionnaire age, sex, level of education and patient's

satisfaction of labial mucosa and gingival color and their anterior teeth appearance. Patients were asked also about anterior teeth mal alignment, anterior teeth caries and non-aesthetic color restorations and they were asked about the selection of restorations, crowns and partial denture aesthetic treatment. Before this study, each patient was given a consent form to fill in for participation in the study then the questionnaire was distributed on those who agree to participate.

Clinical examination

Supra gingival plaque was scored using plaque index (PI) [13]. Gingival inflammation was scored using gingival index (GI) [14].

Statistical analysis

Data were entered and analyzed by frequency and percentages.

Table 1: Interviewer guided questionnaire questions

Sl. No	Questions	Answers			
		Males		Females	
		Yes	No	Yes	No
1	Do you have fillings in your front teeth?	46	154	68	132
2	Do you have crowns or bridges on your front teeth?	36	164	60	140
3	Do you have discolorations in your front teeth?	14	186	46	154
4	Do you have change in your gum color?	38	162	26	174
5	Are you satisfied with the general appearance of your gum?	150	50	64	136
6	Are you satisfied with your tooth color?	150	50	160	40
7	Are you satisfied with your smile?	150	50	160	40
8	Do you feel that the color of your gums effect on your mental?	54	146	64	136
9	Do you have a gummy smile ?	50	150	52	148
10	Do you have a discoloration around the fillings?	22	178	26	174

RESULTS

Table 1 includes the results of the questionnaire. In males group, there were 46 patients with dental fillings, 36 patients have fixed prosthesis, 14 patients have discolorations in anterior teeth and 38 have changed in gingival color. We found 150 patients were satisfied with their gingival appearance. 150 patients were satisfied with their teeth color, 50 patients have gummy smile and 22 patients have discoloration around their fillings.

In females group there were 68 patients who have dental fillings. 60 patients have fixed prosthesis, 46 patients have discolorations in anterior teeth and 26 have changed in gingival color. We found 64 patients were satisfied with their gingival appearance, 160 patients were satisfied with their teeth color, 52 patients have gummy smile and 26 patients have discoloration around their fillings.

Table 2 summarizes the clinical findings, age, sex, plaque index, oral hygiene status and gingival index. In males group the ages ranges from 20 to 90 years (20-30) = 55%, (31-40) = 23%, (41-50) = 12% and (50-90) = 10% and in females group the Ages ranged from 20 to 90 years (20-30) = 67%, (31-40) = 23%, (41-50) = 4% and (50-90) = 6%.

The oral hygiene status in males group was 14% good, 46% fair, and 40% poor oral hygiene of whereas it was 51% good, 31% fair, and 18% poor in females group.

In gingival index (GI) evaluation there were 33% grade (0), 19% grade (1) and 48% grade (2) in males group whereas there were 45% grade (0), 40% grade (1) and 15% grade (2) in females group.

Table 2: Clinical findings

1. Sex:	A. Male (n=200).		
	B. Female (n=200).		
2. Age :	A. Male :	(20-30) = 55% ,	(31-40) = 23% , (41-50) = 12% , (50-90) = 10%
	B. Female :	(20-30) = 67% ,	(31-40) = 23% , (41-50) = 4% , (50 -90) = 6%
3. Plaque index (PLI) and Oral Hygiene status:	A. Male :	Good= 14%	Fair= 46% , and Poor = 40% .
	B. Females:	Good = 51%	Fair = 31% , and Poor = 18%
4. Gingival index (GI) :	A. Male :	Grade 0 = 33% ,	Grade 1 = 19% , Grade 2 = 48%
	B. Females :	Grade 0 = 45% ,	Grade 1 = 40% Grade 2 = 15%

DISCUSSION

The interest to dental appearance is different from person to person in the peoples [12] in Ankara dental school study, there were 57.3% satisfied with their dental appearance [15] compared to 76% in Britain [16]. Change the patient's culture during their life, patient age and patient sex play important role in dental appearance determination [17]. Generally elderly patients (more than 50 years old) were satisfied more than younger patients with their dental look [18,19], due to the elderly patients who were not interested for their teeth shape compared to younger patients [20].

There was Swedish study on elderly patients indicated that all patients said that dental good-looking is fundamental [21], this study agrees with the results of the Germany study on old patients groups regarding to the effect of dental appearance in the general look [22].

In the present study, we detected that there were no differences in dental appearance satisfaction between older and younger patients due the effect of media which shows needing men and women to be looked youth and lovely. There were differences in dental color satisfaction among the patients in the study of 180 samples according to six and age of patients [23].

In the present study we found 150 patients were satisfied with their gingival appearance, 150 patients were satisfied with their teeth color, 50 patients have gummy smile and 22 patients have discoloration

around their fillings in males group. In females group, in the present study we found also 64 patients were satisfied with their gingival appearance, 160 patients were satisfied with their teeth color, 52 patients have gummy smile and 26 patients have discoloration around their fillings with higher percentage than in previous studies of different populations.

Dental color is more important factor in the patients smile appearance and their satisfaction [17]. In previous study on males and females patients, the results agreed on the popular thought that the females patients are more interested with their teeth appearance than males [12]. On the other hand in the previous Swedish study, it was discovered that the men are interested to dental shape more than women [24] whereas there were no differences in the other study [25,18].

CONCLUSION

The normal gingival pigmentation appears due to some factors e.g. systemic, local and environmental factors. Most of males patients in this study were satisfied of gingival and teeth appearance more than females. There were negative effects of teeth color, teeth protrusion and fillings on satisfaction of the patients. In the present study, the oral hygiene status of females group is better than males group. The gingival inflammation in males group is more severe than in females group. These results are useful to know the patients requests during esthetic periodontal treatment. The patient concepts to his/her teeth and gingival

appearance should be highly considered during aesthetic periodontal treatment to establish high patient satisfaction.

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