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Original Article

Gingivitis and Correlated Elements Amongst Patients Visiting Dental Care Facility in Rawalpindi

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ABSTRACT

Gingivitis is one of the commonly known oral diseases globally. Gingival diseases are non-ordinary contamination that embraces an assorted clan of pathological units triggered by numerous etiologic aspects, if left untouched can crack into an added dangerous malady known as periodontitis. **Objectives**: To evaluate the incidence of gingivitis in patients coming to dental care facility i.e., DentoScope Institute of Advanced Dentistry, Rawalpindi and to learn the level of gingivitis and its related hazard aspects. **Methods:** This was a cross sectional research carried out to evaluate the level of gingivitis amongst the subjects appearing at DentoScope Institute of Advanced Dentistry Rawalpindi, Pakistan. The time of the research was eight months from January 2022 to August 2022. Non-probability purposive sampling was carried out for the collection of the subjects. **Results:** 400 patients were observed of which 172 (43%) were females and 228 (57 %) were males. With a total of 141 patients out of 400, the age group from 30 to 39 appears to be the largest amongst all other varieties, followed by the 40 to 49 age group, which had a total of 131 patients. **Conclusions:** Inflamed gingiva, also commonly known as gingivitis is an avoidable normally happening disease in Pakistan that can be initiated by several various causative issues. Amongst diverse related risk aspects that cause gingivitis, chewing tobacco or tobacco smoking is the most regular one reported.

INTRODUCTION

Gingivitis is one of the commonly known oral diseases globally [1]. Gingival diseases are non- ordinary contamination that embraces an assorted clan of pathological units triggered by numerous etiologic aspects, if left untouched can crack into an added dangerous malady known as periodontitis [2]. However, if gingivitis is left untreated and unregulated, it can result in a gap between the gums and the teeth, which can harm the bone and tissue supporting the teeth [3]. If the infection worsens, teeth may start loosening up in the gums and ultimately may need to get extracted [4]. Numerous insults add to gingivitis from use of certain medicines, smoking, uncontrolled diabetes, irritation by dental appliances, HIV and over hanging fillings/restorations [5]. Gingivitis is preventable and avoidable disease of periodontium. This is only possible if appropriate brushing technique is adapted, twice a day every day; use of mouth washes, regular visits to the dentist, and proper cleaning of mouth after every meal [6]. In Pakistan, several scholars have established that periodontal problems never happen unaided; they are almost always linked with other associated elements [7-10]. The goal of the current study was to evaluate the incidence of gingivitis in patients coming to dental care facility i.e., DentoScope Institute of Advanced Dentistry, Rawalpindi Pakistan and to learn the level of gingivitis and its related hazard aspects.

METHODS

This was a cross sectional study carried out to evaluate the level of gingivitis amongst the subjects visiting DentoScope Institute of Advanced Dentistry, Pakistan for

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treatment. The length of the current study was eight months i.e., January 2022 to August 2022. Non-probability purposive sampling was carried out for the collection of the subjects. A Confidence Level of 95% was considered with precision of 5% and a predictable proportion of 50% was set. Conferring to the Daniel formula for sample size design 400 samples was calculated. Hence, 400 patients were cross-examined to estimate the severity of gingivitis. Patients aged among 18 to 50 years with all teeth except third molar. Patients with any identified handicapped, systemic diseases and illiterate patients were exempted from the current study. The locked concluded questionnaire was reformed from studying various research studies which consisted of two parts. Frist comprised the queries about the demographic features of the participants and the second encompassed the material on risk features that are related to gingivitis. To analyze the data SPSS version 25.0 was used. Frequency tables, occurrence distribution & percentages were used for tentative statistics like gender and Age-groups. Chi Square test was used to extent relations amongst the variables. P-value ≤ 0.05 was set as significant for the study. Vocal info was delivered to the all contributors regarding the persistence, risk and aids of the research. Inscribed knowledgeable agreement was attained from each contributor. All of the data provided by members were kept private and unidentified.

RESULTS

A sum of 400 subjects were observed of which 172 (43%) were females and 228 (57 %) were males. With a total of 141 patients out of 400, the age cluster from 30 to 39 appeared to be the largest amongst all other, followed by the 40 to 49 age cluster, which had a total of 131 patients. According to the findings, different types of gingivitis were seen in different patients. Among the patients, 88 (22%) had severe inflammation, 45 (11.3%) had mild inflammation, and 267 (66.7%) had moderate signs of gingivitis. (Table 1).

Variables	Frequency (%)
Gender	
Female	172 (43%)
Male	228 (57%)
Total	400 (100%)
Age Groups	
20-29	75 (18.75%)
30-39	141 (35.25%)
40-49	131 (32.75%)
50 and above	53 (13.25%)
Total	400 (100%)
Gingival Index (GI)	
Mild	45 (11.3 %)
Moderate	267 (66.7%)
Severe	88 (22%)
Total	400 (100%)

Table 1: Demographic Variables

Table 2 shows that bulk of the subjects (n=318, 79.5%) didn't have any systemic issues alongside with gingivitis. Many of the participants (n=272, 68%) used tobacco or tobacco containing products. Many of subjects (n=332, 83%) brushed only once daily as equated to 17% who brushed twice daily. Most of the members (n=360, 90%) used toothpaste for brushing as equated to 40 (10%) who used maswak as the cleaning substantial. Majority of the patients (n=301, 75.25%) stated that their gums bleed while brushing however a good number of these subjects (n=277, 69.25%) not once go to see a doctor for any of their dental issues. Maximum of the subjects (n=260, 65%) had ache in their gums and consequently utmost of them (n=249, 62.25%) also had mastication issues though eating due to the ache. P value < 0.05, significant association was seen among the amount of gingivitis and tobacco mastication or tobacco comprising stuffs. It has been established that the subjects using tobacco in any custom are extremely pretentious by the gingivitis as related to those subjects who are not using tobacco in any custom which also stressed the point that the usage of tobacco can source solemn circumstances e.g., oral sub mucosal fibrosis plus even oral cancer. A P value < 0.001, highly significant association among sex of the patients and gingivitis was establish. Males (169, 74.1%) had more severe inflammation whereas maximum number of females (111, 64.5%) indicated a moderate form of inflammation.

Variables		Incidence (%)
"Do you have any systemic problem?"	No	318 (79.5%)
	Yes	82 (20.5%)
"Do you take any form of tobacco or tobacco containing products?"	Yes	272 (68%)
	No	128 (32%)
"How many times a day you clean (brush/ maswak) your teeth?"	Once	332 (83%)
	Twice	68 (17%)
	Thrice	00 (00%)
"What instrument you use for cleaning teeth?"	Datum	00
	Neem	00
	Tooth paste	360 (90%)
	Maswak	40 (10%)
"Does your gum bleed while brushing?"	Yes	301 (75.25%)
	No	99 (24.75)
"Have you ever visited a dentist?"	Yes	123 (30.75)
	No	277 (69.25%)
"Do you have chewing problems while eating due to pain in the gums?"	Yes	260, 65%)
	No	140 (35%)
"Do you have a problem of bad breath?"	Yes	249 (62.25%)
	No	151 (37.75%)

Table 2: Risk features related with gingivitis and features causing gingival tissue

DISCUSSION

Gingivitis is an avoidable usually stirring disease in Pakistan

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that can be instigated by numerous diverse risk aspects such as use of medicines, tobacco smoking, diabetes mellitus, orthodontic appliances, improper brushing etc. [11]. Amongst the various related risk features that grounds the gingivitis, chewing/smoking tobacco was the most regular one described. The tobacco chewing was allegedly similarly shared in both the genders [12, 13]. Gingivitis affects gum health bringing about trouble in chewing; stagnation, exasperation of the gum and bad odor that does not go away like that even after cleaning the teeth via brushing or mouth washes [14]. Though, gingivitis could be prohibited and is rescindable by means of the appropriate brushing procedure; two times regularly brushing along with consistent visit to the clinic of dentist, mouth washes usage and appropriate cleaning once meal is served [15]. The existing study displays that maximum number of the subjects were using brush only a time daily and the brushing procedure was also dubious henceforth the higher ratio of gingivitis between these patients. The current study ratifies this conclusion that the patients using pastes and mouthwashes had somewhat improved oral cleanliness as related to those who were using just brush or mouthwash, since usage of both these products condensed the amount of bacterial oral flora and hence prohibited a person from gingival tenderness. It's well known that braces specially fixed are responsible for certain pathological dissimilarities in the mouth of the patients [16]. These deviations are detected through initially in the management. These fixed appliances if not well kept hygienically helps by offering a capacity round the tooth where plaque can accrue on the surface around the tooth that can further leads and causes gingival tenderness [17, 18]. In the current study, few of the patients particularly patients who were female and were having orthodontic appliances, were establish to have poorer oral hygiene with plaque and bad odor. Therefore, orthodontic appliances in the management of patients can be measured as a risk aspect for gingivitis and periodontal swelling [19, 20]. Epidemiological surveys conducted on a steady routine may give essential data about changes in pattern and Prevalence of gingivitis, which can be supportive in design & providing treatment.

CONCLUSIONS

Inflamed gingiva, also commonly known as gingivitis is an avoidable normally happening disease in Pakistan that can be initiated by several various causative issues. Amongst diverse related risk aspects that cause gingivitis, chewing tobacco or tobacco smoking is the most regular one reported. A highly significant association was found among gender of the patients and gingivitis as well as amongst the degree of gingivitis and tobacco. Males were having more severe gingival inflammation.

Conflicts of Interest

The authors declare no conflict of interest

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