REFACS
Revista Família, Ciclos de Vida e Saúde no Contexto Social

Evaluation of the knowledge of odontology undergrads and professors of a private university with regards to gingival recession

Avaliação do nível de conhecimento de acadêmicos e professores do curso de odontologia de uma instituição privada sobre recessão gengival

Evaluación del nivel de conocimiento de académicos y profesores de la carrera de odontología de una institución privada sobre recesión gingival

Dawylla Kelly Queiroga de Lima[1]
Raíres Chaves da Silva Rodrigues[2]
Rachel Christina Queiroz Pinheiro[3]
Keila Cristina Raposo Lucena[4]

The objective of this study was to evaluate the level of knowledge about gingival recession of students and professors of a teaching clinic of the Odontology course of a private teaching institution. This is a quantitative, cross-sectional and exploratory research. A structured questionnaire with objective questions was applied. Among those interviewed, 100% stated to know what gingival recession is; only 48.54% of students and 15.38% of professors state to know Miller's classification. The clinical conduct adopted by the participants was coherent and its result satisfactory, since most answers were according to the expected with regards to gingival recession.
Descriptors: Gingival retraction; Gingiva; Oral health.

O objetivo deste estudo foi avaliar o nível de conhecimento sobre recessão gengival por parte de alunos e professores de uma clínica escola do curso de Odontologia de uma instituição privada de ensino. Esta é uma pesquisa quantitativa, transversal e exploratória. Foi aplicado um questionário semiestruturado com perguntas objetivas. Dentre os entrevistados, 100% afirmaram conhecer o que era retração gengival; Apenas 48,54% dos alunos e 15,38% dos professores relatam conhecer a classificação de Miller. A conduta clínica adotada pelos entrevistados se mostrou coerente e o resultado satisfatório, uma vez que a maioria das respostas obtidas foi condizente ao esperado quanto à recessão gengival.
Descritores: Retração gengival; Gengiva; Saúde Bucal.

El objetivo de este estudio fue evaluar el nivel de conocimiento sobre recesión gingival por parte de alumnos y profesores de una clínica-escuela de la carrera de Odontología de una institución privada de enseñanza. Esta es una investigación cuantitativa, transversal y exploratoria. Fue aplicado un cuestionario semiestructurado con preguntas objetivas. Entre los entrevistados, 100% afirmaron conocer lo que era retracción gingival; solo 48,54% de los alumnos y 15,38% de los profesores relatan conocer la clasificación de Miller. La conducta clínica adoptada por los entrevistados se mostró coherente y el resultado satisfactorio, dado que la mayoría de las respuestas obtenidas fue acorde a lo esperado en cuanto a la recesión gingival.
Descriptores: Recesión gingival; Encia; Salud bucal.

1. Graduation student in the Odontology Course of the University Center of João Pessoa (UNIPÊ), João Pessoa, PB, Brazil. ORCID: 0000-0002-0403-8327. E-mail: dawyllakelly@hotmail.com
2. Graduation student in the Odontology Course at UNIPÊ, João Pessoa, PB, Brazil. ORCID: 0000-0001-6814-6207. E-mail: raires06@hotmail.com
3. Dental Surgeon. MS in Odontology. Professor of the Discipline "Integrated Clinic" at UNIPÊ, João Pessoa, PB, Brazil. ORCID: 0000-0002-8044-7544. E-mail: odontogrupo@gmail.com
4. Dental Surgeon. MS and PhD in Periodontics. Professor of the Discipline "Integrated Clinic" at UNIPÊ, João Pessoa, PB, Brazil. ORCID: 0000-0002-8079-6103 E-mail: keila.raposo@gmail.com

INTRODUCTION

Gingival recession is a mucogingival defect characterized by the migration of the gingival margin in relation to the cementoenamel junction as a result of the loss of conjunctive fibers. It is responsible for alveolar bone crest resorption and junction tissue necrosis. it can present itself in located or generalized forms[1,2].

The periodontium is made up of tissues that cover and/or protect the teeth: gums, that aim to protect underlying tissues; the insertion apparatus, composed of the periodontium, cement and alveolar bones. It is subject to morphologic and functional variations according to age[3-5].

The marginal soft tissue is common in populations with good or lacking oral hygiene standards. Certain evidence suggests that the main cause for the recession among young people are injuries from brushing; among adults, the periodontal disease may be the main cause[6,7].

Among children, it may be related to oral habits, such as digital and pacifier sucking or anterior open bite and incomplete closing of the lips[8]. Still, other factors, such as dental positioning, gingival thickness, high frenum insertion, occlusal and mechanical trauma, in addition to gingival inflammation, might be associated to this periodontal condition[8].

Regarding clinical issues involved with this mucogingival condition, the following stand out: dentinal sensitivity, unpleasant aesthetic, loss of periodontal support, difficulty to keep adequate oral hygiene, difficulty in periodontal repair and increased risk of cavities in the region[9].

Patients may present an unpleasant aesthetic aspect when smiling, visible roots, fear of losing teeth, hypersensitive roots caused by thermal stimuli or by contact and gingival sensitivity hen brushing or masticating[10].

In the odontology clinic, this gingival defect is a common problem that, in addition to prejudices to one's health, can lead the patient to feel aesthetically uncomfortable. Therefore, students and professors who are directly connected to the patients must be prepared to know how to intervene and treat the discomforts generated by this problem.

The objective of this study was to evaluate the level of knowledge about gingival recession of students and professors of a teaching clinic of the Odontology course of a private teaching institution.

METHOD

This is a quantitative, cross-sectional research, conducted in the University Center of João Pessoa - UNIPÊ.

The research universe was made up of all professors and students that finished the course in 2017, and received attention at the Teaching Clinic Afonso Pereira, from the Odontology Course. The sample of the study was decided upon according to a census and included 114 students and 20 professors. A pilot study with 10% of the sample was conducted.

An adapted structured questionnaire[11] was used for data collection, and the following data was registered: gender, age, and issues on gingival recession. The questionnaire had 11 objective questions and 1 open one, and the same instrument was used for students and teachers.

After receiving approval from the Research Ethics Committee from UNIPÊ (protocol n. 361/2016), the students and professors were individually asked to participate in the research, which was then verbally explained to them. After the explanation, the participants who were interested in participating signed the Free and Informed Consent Form and answered, individually, the questionnaire, according to their availability.

Data was inserted in a databank at Microsoft Excel and a descriptive analysis was conducted using the software IBM SPSS (21.0).

Since this research involved human beings, the demands of Resolution n.466/1212 of the National Council of Health were attended to.

RESULTS

From an ideal sample of 114 graduation students enrolled in the ninth and tenth

semesters of the course, 103 answered the questionnaire; from 20 professors, 13 did.

From the 103 interviewed students, 55 were from the ninth semester, and 48 from the tenth. Regarding gender, 33 interviewees were male and 70 female. Regarding the teacher, 4 were male and 9 female.

Data collected indicate that 100% of participants know gingival recession. When asked about whether gingival retraction and recession were synonyms, however, 76.70% stated that they were. Among professors, most of them (53.85%) stated that gingival retraction and recession were different situations (Table 1).

Table 2, on the other hand, show that 47.57% of students and 84.62% of professors do not know Miller's (1985) classification for gingival recessions.

Table 1. On the synonymy between gingival retraction and recession. João Pessoa, 2017.

WHETHER GINGIVAL RETRACTION AND RECESSION ARE SYNONYMS						
	YES		NO		NONE OF THE ABOVE	
STUDENTS	79	76.70%	23	22.33%	1	0.97%
PROFESSORS	6	46.15%	7	53.85%	0	0.00%

Table 2. Knowledge about Miller's classification. João Pessoa, 2017.

KNOWLEDGE ABOUT MILLER'S CLASSIFICATION (1985) FOR GINGIVAL RECESSIONS						
	YES		NO		NONE OF THE ABOVE	
STUDENTS	50	48.54%	49	47.57%	4	3.88%
PROFESSORS	2	15.38%	11	84.62%	0	0.00%

Similarly, when asked about what category in this classification indicates the worst prognosis (Table 3), most students (59.22%) and professors (84.62%) did not answer the question, which suggests a level of insecurity regarding the subject. It is interesting to highlight that the issue mentioned in Table 3 is subjective, and the students created two new classifications. 3.88% answered class V and 1% answered class X, showing complete lack of knowledge about Miller's prognosis for gingival recessions.

The knowledge of graduation students and teachers on the etiological factors are shown in Image 1, and students mention, in order of importance, brushing injuries, gingival inflammation and occlusion trauma. Among professor, brushing injuries keeps its place, but the other two are inverted, with occlusion trauma first and gingival inflammation later. Orthodontic treatment and the position of the labial frenum occupy the fourth and fifth places in both groups, albeit in different percentages.

Table 3. Knowledge about types of recession with worst prognosis according to Miller's classification. João Pessoa, 2017.

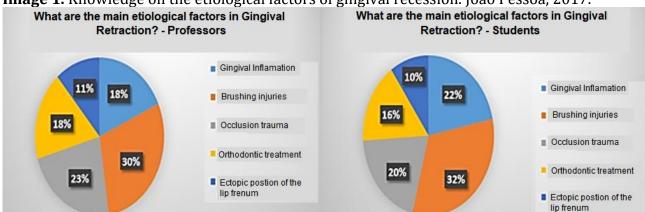| WHAT TYPE OF RECESSION HAS THE WORST PROGNOSIS FOR MILLER?											
	TYPE									NONE OF THE ABOVE	
	II		III		IV		V		X		
STUDENTS	2	1.94%	11	10.68%	24	23.30%	4	3.88%	1	0.97%	61	59.22%
PROFESSORS	0	0.00%	0	0.00%	2	15.38%	0	0.00%	0	0.00%	11	84.62%

Image 1. Knowledge on the etiological factors of gingival recession. João Pessoa, 2017.

Among suggested therapies, graduation students and professors interviewed stated that the main forms of treatment are gingival plastic surgery, and photopolymer restorations, respectively.

Table 4. Knowledge about types of treatment for the recessions. João Pessoa, 2017.

	MAIN TYPES OF TREATMENT FOR GINGIVAL RETRACTION						
	Photopolymer Restoration		Porcelain Facets		Gingival Plastic Surgery		Dental extraction
STUDENTS	70	67.96%	14	13.59%	79	76.70%	6	5.83%
PROFESSORS	6	46.15%	4	30.77%	11	84.62%	0	0.00%

DISCUSSION

Gingival recession may be defined as the apical placement of the marginal tissue in relation to the cementoenamel junction with the exposure of root surfaces. Its etiology is multi-factorial and its pathogenesis is unknown. The prevalence, extension and severity increase with age[11,13].

Clinically, Miller's (1985) classification is used to create diagnostics and prognostics for gingival recessions. According to this classification, gingival recessions are defined according to their extension, and are divided in: Class I, Class II, Class III and Class IV, the latter indicating the worst prognosis[2,6].

In a study[11], 46.5% of those interviewed stated to know Miller's classification, while 53.5% said they did not, corroborating the results found here, according to which 72.1% do not know the type of recession with the worst prognosis for treatment. Most did not know this classification.

The main etiological factors in gingival recessions are: gingival inflammation, brushing injuries, the insertion of frenums and frenulums and inherent consequences to orthodontic treatments[2]. In this research, according to Image 1, brushing injuries were the main etiological factor according to the students and professors, thus corroborating other studies[3,14], which consider traumatic and abrasive brushing habits to be the main cause of gingival retraction. Another study[1] points out that a non-traumatic brushing technique is needed to avoid recession.

There are many forms of treatment for gingival recession[15]. Fluorine therapy and restoring treatments are one of the solutions for this problem, minimizing hypersensitivity and aesthetic defects[11]. Additionally, this anti-aesthetic defect may cause enamel hypersensitivity and lead to root cavities and non-carious cervical lesions such as cervical abrasion[16].

The use of modified glass resin ionomers and micro-particule composite resin is suggested in restorations of coated cervical lesions, with no signs of inflammation or formation of periodontal pockets, since the patient maintains a good biofilm control and restorations are adequately outlined and finished[17,18].

Although this is a more conservative

and restrictive result, in this research, 67.96% of students and 46.15% professionals opted for this type of therapy to the detriment of most of these who would use more invasive techniques such as gingival plastic surgeries.

Surgical therapy for root coatings can also be an option of treatment, indicated for cases from pedunculated shreds to free gingival grafts[19,20]. The data found in this research corroborates the statements described, since most interviewees (students and professional) would adopt these therapeutic conducts.

However, another study[11] showed that only 16.3% of students would perform root covering through the use of pedunculated shreds.

The treatment of gingival recessions is planned according to its etiology. In this study, almost all individuals had knowledge about the subject. For each type of recession there is a more adequate treatment, which can be a gingival plastic surgery, a photopolymer restoration, porcelain facets, or, as a last resort, dental extraction, the latter to be used in cases where the keratinized mucosa is too thin or the recession is class IV in Miller's classification, and associated to a certain degree of dental mobility.

This data is consistent when one considers the statements of the participants, since they chose more conservative therapeutic conducts for the gingival recessions when compared to the option of dental extraction. Miller's classification is important in the decision-making process for any treatment and for a perfect prognosis, but the interviewees showed insecurity with regards to it, which is a relevant. factor

Although the participants did not know the prognosis and the classification of recessions, their knowledge was satisfactory when it comes to selecting a therapeutic conduct.

CONCLUSION

Considering the objectives of this work and the results it found, participants showed to have knowledge on the definition and etiology of gingival recessions.

However, Miller's classification, the main way to find diagnostics and prognostics of gingival recessions, needs to be more discussed within the university environment.

Regarding the clinical conduct adopted by the participants, although it was not very conservative, it was coherent, and its results were satisfactory, since most answers were according to the expected with regards to gingival recession.

REFERENCES

1. Araújo ACS, Jovino-Silveira RC, Almeida ECB. Avaliação dos níveis de recessão gengival em estudantes de Odontologia da Universidade Federal de Pernambuco. RGO (Porto Alegre). 2007; 55(2):139-42.
2. Cimões R, Gusmão ES, Donos N. Manual prático para cirurgia periodontal e periimplantar. São Paulo: Napoleão; 2013. 336p.
3. Newman MG, Takei H, Klokkevold P, Carranza F. Periodontia clínica. 12ed. Rio de Janeiro: Elsevier; 2016. 904p.
4. Kolte R, Kolte A, Mahajan A. Assessment of gingival thickness with regards to age, gender and arch location. J Indian Soc Periodontol. [Internet]. 2014 [cited in 14 ago 2017]; 18(4):478-81. DOI: 10.4103/0972-124X.138699.
5. Stellini E, Comuzzi L, Mazzocco F, Parente N, Gobbato L. Relationships between different tooth shapes and patient's periodontal phenotype. J Periodontal Res. [Internet]. 2013 [cited in 14 ago 2018]; 48(5):657-62. DOI: 10.1111/jre.12036.
6. Lindhe J, Lang N, Karring T. Tratado de periodontia clínica e implantologia oral. 5ed. Rio de Janeiro: Guanabara Koogan; 2011. 1304p.
7. Rotundo R, Nieri M, Mori M, Clauser C, Prato GP. Aesthetic perception after root coverage procedure. J Clin Periodontol. [Internet]. 2008 [cited in 14 ago 2017]; 35(8):705-12. DOI: 10.1111/j.1600-051X.2008.01244.x.
8. Orrico SRP, Cirelli CC, Rosa FP, Bacalhau JT. Recessão gengival na dentição decídua: relato de caso clínico. Rev Ciênc Méd Biol. 2003; 2(2):276-82.
9. Yared KFG, Zenobio EG, Pacheco WA. Etiologia multifatorial da recessão periodontal. Rev Dent Press Ortod Ortop Facial. 2006; 11(6):45-51.
10. Borghetti A, Corti VM. Cirurgia plástica periodontal. 2ed. Porto Alegre: Artmed; 2011. 464p.
11. Casusa AAL, Silva ELMS, Lucena KRR, Ribeiro ILA. Percepção dos acadêmicos de odontologia quanto a conduta clínica frente as recessões gengivais. PerioNews. 2015; 9(4):335-40.

12. Ministério da Saúde (Br). Conselho Nacional de Saúde. Resolução CNS 466/2012 [Internet]. Brasília, DF; 2012 [cited in 14 ago 2017]. Available from:
http://bvsms.saude.gov.br/bvs/saudelegis/cns/2013/res0466_12_12_2012.html.

13. Kahn S, Menezes CC, Imperial RC, Leite JS, Dias AT. Influência do biótipo periodontal na Implantodontia e na Ortodontia. Rev Bras Odontol. 2013; 70(1):22-9.

14. Rasperini G, Acunzo R, Cannalire P, Farronato G. Influence of periodontal biotype on root surfasse exposure during orthodontic tratament: a preliminary study. Int J Periodontics Restorative Dent. [Internet]. 2015 [cited in 18 ago 2017]; 35(5):665-75. DOI: 10.11607/prd.2239.

15. Dantas AAR; Silva ERC; Sako JS. Tratamento estético periodontal: revisão de literatura sobre alguns tipos de cirurgias. Rev Odontol Univ Cid São Paulo. 2012; 24(3):226-34.

16. Marini M, Greghi SL, Passanezi E, Sant'ana A. Gingival recession: prevalence, extension and severity in adults. J Appl Oral Sci. [Internet]. 2004 [cited in 18 ago 2017]; 12(3):250-5. DOI: 10.1590/S1678-77572004000300017.

17. Lucchesi J, Santos VR, Amaral C, Perruzo DC, Duarte PM. Coronally positioned flap for treatment of restored root surfaces: A 6-month clinical evaluation. J Periodontol. [Internet]. 2007 [cited in 14 ago 2017];78(4):615-23. DOI: 10.1902/jop.2007.060380.

18. Andrade LP, Biscarde A, Moreira A, Ribeiro E, Bittencourt S. Tratamento de dentes com recessão gengival e abrasão cervical. Rev Bahiana Odontol. 2012; 3(1):86-99.

19. Santamaria M, Suaid F, Nociti Jr FH. Casati M, Sallum AW, Sallum EA. Periodontal surgery and glass ionomer restoration in the treatment of gingival recession associated with a non-carious lesion: Report of three cases. J Periodontol. [Internet]. 2007 [cited in 18 ago 2017]; 78(6):1146-53. DOI: 10.1902/jop.2007.060380.

20. Kina JR, Suzuki TYU, Kina EFU. Recobrimento de múltiplas recessões com enxerto subepitelial: tratamento de descontaminação da superfície radicular com laser de Erbium YAG. Arch Health Invest. 2014; 3(2):40-7.

CONTRIBUTIONS
Dawylla Kelly Queiroga de Lima and Raíres Chaves da Silva Rodrigues took part in the execution of the research and in the writing of the article. **Rachel Christina Queiroz Pinheiro** contributed as a joint supervisor of the research and its writing. **Keila Cristina Raposo Lucena** took part as a supervisor and in the writing of the article.