



Research

Is menopause associated with an increased risk of tooth loss in patients with periodontitis?



Ricardo Castro Alves^{a,*}, Sérgio Antunes Félix^a, Alberto Rodriguez Archilla^b

^a Centro Interdisciplinar de Investigação Egas Moniz, Instituto Superior de Ciências da Saúde Egas Moniz, Portugal

^b Facultad de Odontología, Universidad de Granada, Spain

ARTICLE INFO

Article history:

Received 16 June 2013

Accepted 24 September 2013

Available online 24 November 2013

Keywords:

Menopause

Oestrogen

Osteoporosis

Periodontal disease

Tooth loss

ABSTRACT

Aim: To analyse the potential effects of menopause on tooth loss in women with chronic periodontitis.

Methods: The study included 102 women between 35 and 80 years old with chronic periodontitis and at least six teeth divided into two groups: the study group (SG), which consisted of 68 menopausal women, and the control group (CG), which consisted of 34 pre-menopausal women. Each participant was given a survey to collect several demographic data points, general and oral clinical histories, gynaecological history and behavioural habits. Several oral and periodontal measurements were recorded, including the number of teeth, plaque index, presence of calculus, probing depth, bleeding on probing, gingival recession and attachment loss. The following statistical tests were used: Chi-square, Fisher, t-test for independent samples, Wilcoxon-Mann-Whitney non-parametric test and ANCOVA.

Results: At least one tooth was missing in 98% of the women in the study. The SG exhibited significantly fewer teeth than the CG (SG 10.83 ± 5.90 , CG 6.79 ± 4.66), but the difference was not significant after adjusting for age ($p < 0.05$). On the other hand, significant difference was not observed between the groups for the major periodontal measurements taken.

Conclusions: Menopause did not appear to significantly affect tooth loss in the study population. The effect of menopause is likely small compared with other clinical and socio-economic factors.

© 2013 Sociedade Portuguesa de Estomatologia e Medicina Dentária. Published by Elsevier España, S.L. All rights reserved.

Estará a menopausa associada a um risco acrescido de perda dentária em doentes com periodontite?

R E S U M O

Objetivos: Analisar o possível efeito da menopausa sobre a perda dentária em mulheres com periodontite crónica.

Métodos: Cento e duas mulheres entre os 35-80 anos com periodontite crónica e pelo menos 6 dentes foram divididas em 2 grupos: grupo de estudo (GE) constituído por 68 mulheres na menopausa e grupo controlo (GC) constituído por 34 mulheres pré-menopáusicas. Foi aplicado um questionário onde se recolheram diversos dados sociodemográficos, história

Palavras-chave:

Menopausa

Estrogénio

Osteoporose

Doença periodontal

Perda dentária

* Corresponding author.

E-mail address: ricardocastroalves@gmail.com (R. Castro Alves).

clínica geral e oral, antecedentes ginecológicos e hábitos. Adicionalmente, foram avaliados diversos parâmetros orais e periodontais incluindo: número de dentes, índice de placa, presença de tártaro, profundidade de sondagem, hemorragia à sondagem, recessão gengival e perda de inserção. Na análise estatística foram utilizados os testes de Chi-Quadrado, Fisher, teste-t para amostras independentes, teste não-paramétrico de Wilcoxon-Mann-Whitney e ANCOVA.

Resultados: Noventa e oito por cento das mulheres estudadas apresentam pelo menos um dente ausente. Ao comparar o grupo de mulheres pré e pós-menopáusicas, o número de dentes é significativamente menor nas mulheres na menopausa (GE $10,83 \pm 5,90$; GC $6,79 \pm 4,66$), no entanto, depois de ajustado o efeito da idade esta diferença deixa de ser estatisticamente significativa ($p < 0,05$). Por outro lado, não se observam diferenças significativas entre os 2 grupos em relação aos principais parâmetros periodontais avaliados.

Conclusões: Na população estudada a menopausa não parece influenciar significativamente a perda dentária. Comparativamente a outros fatores socioeconômicos e clínicos, o efeito na menopausa na doença periodontal será provavelmente reduzido.

© 2013 Sociedade Portuguesa de Estomatologia e Medicina Dentária. Publicado por Elsevier España, S.L. Todos os direitos reservados.

Introduction

After menopause, oestrogen production decreases significantly, which is thought to be the major cause of primary osteoporosis.^{1,2} Reduced bone density in the jaws may be linked to increased risk of tooth loss in individuals without periodontal disease or increased disease severity in individuals with periodontitis.³ The potential link between osteoporosis and periodontal disease has generated significant interest because these two disease share several risk factors in addition to bone loss.

Several studies have shown a connection between decreased skeletal bone mineral density (BMD) and decreased numbers of teeth,⁴⁻⁹ while other studies have not shown this relationship.¹⁰⁻¹³ Studies analysing the relationship between decreased systemic BMD and periodontal disease progression have also found contradicting results.^{5,9,11,13-15} In addition to the effects on bone, oestrogens may also interfere with other periodontal tissues (gingiva and periodontal ligament) and affect the immune-inflammatory response of the patient.¹⁶⁻¹⁸ Improvements in periodontal measurements,^{19,20} and tooth retention²¹⁻²³ have also been reported in women undergoing hormone replacement therapy (HRT), although studies with contradicting results also exist.^{24,25}

After more than 20 years, the relationship between menopause, osteopenia, osteoporosis and tooth loss remains somewhat controversial.

The aim of this study was to analyse the potential effects of menopause on tooth loss by comparing several general, oral and periodontal measurements between two groups of women (pre- and post-menopausal) with chronic periodontitis.

Materials and methods

This cross-sectional study was performed at the Instituto Superior de Ciências da Saúde Egas Moniz (Monte da Caparica,

Portugal) with prior approval from the Institution's Ethics Committee.

Women between 35 and 85 years old who had at least 6 teeth, had been diagnosed with chronic periodontitis and had not been treated during the last year were selected from patients referred for periodontal evaluation. Women within any of the following categories were excluded: diagnosis of aggressive periodontitis, refusal to sign the informed consent form, current participation in another study or incomplete survey or periodontal exam.

Of the 111 women chosen to participate in the study, eight did not meet the inclusion criteria, and one declined to participate, which resulted in a final sample of 102 patients. The patients were divided into two groups based on their menopausal state: a study group (SG) consisting of 68 postmenopausal women and a control group (CG) with 34 premenopausal women.

A woman was considered to be in menopause if had not menstruated for more than one year or had had a hysterectomy or bilateral oophorectomy.²⁶

The criteria defined by the periodontal disease surveillance workgroup at the Centers for Disease Control and Prevention were used to diagnose periodontal disease.²⁷

A survey consisting of 48 questions covering several areas (personal, socioeconomic, medical history, current medication, habits and lifestyle, dental history and oral hygiene routines) was administered to all of the participants. The gynaecological history was also recorded to determine hormonal exposure levels (age of menarche, number of pregnancies, number of births, age of menopause and oral contraceptive or hormone replacement use for longer than 6 months).

All oral and periodontal measurements were performed by a single examiner (R.C.A.) who was blind to the data obtained from the survey and the menopausal status. The examiner was trained before the beginning of the study by an experienced observer until their measurements agreed more than 90% of the time. The measurements were considered to agree when they were ≤ 1 mm different. The calibration process was

Download English Version:

<https://daneshyari.com/en/article/3173772>

Download Persian Version:

<https://daneshyari.com/article/3173772>

[Daneshyari.com](https://daneshyari.com)