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MONICA MORENO DE CARVALHO

**Relationship Between the Degree of Radio-induced Mucositis in
Patients with Head and Neck Cancer and Clinical-Pathological
Characteristics and Demographics**

**Araçatuba - SP
2025**

MONICA MORENO DE CARVALHO

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Patients with Head and Neck Cancer and Clinical-Pathological
Characteristics and Demographics**

Dissertação apresentada à Universidade Estadual Paulista (UNESP), Faculdade de Odontologia de Araçatuba, para obtenção do título de Mestra em Odontologia.

Área de Concentração: Estomatologia e Psiconeuroimunologia

Orientadora: Profa. Dra. Aline Satie Takamiya

Coorientador: Prof. Dr. Glauco Issamu Miyahara

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**“A educação tem raízes
amargas, mas os seus frutos são
doces.”**

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RESUMO

CARVALHO, M. M. **Relação entre o grau de mucosite radio-induzida em pacientes com câncer da cabeça e do pescoço e as características clínico-patológicas e demográficas.** 2025. Dissertação (Mestrado) - Faculdade de Odontologia, Universidade Estadual Paulista (UNESP), Araçatuba, 2025.

A mucosite oral é um processo inflamatório causado pelos efeitos citotóxicos dos tratamentos antineoplásicos, sendo frequentemente observado em pacientes submetidos a tratamentos na região de cabeça e pescoço. Prejudicando significativamente os indivíduos e afetando a fala, deglutição e a mastigação. A etiopatogênese da mucosite ainda permanece bastante controversa. Os fatores relacionados ao tratamento e ao paciente têm sido apontados, como fatores causadores e modificadores das alterações de mucosites orais radio-induzidas. Assim, o propósito deste estudo foi avaliar a relação entre o grau de mucosite radio-induzida, os aspectos clínicos-patológicos e demográficos em pacientes durante o tratamento de câncer de cabeça e pescoço. Para a realização deste estudo, foram recrutados pacientes diagnosticados com câncer da cabeça e pescoço, submetidos ao tratamento de radioterapia obrigatório. Os pacientes foram avaliados clinicamente diariamente e responderam verbalmente a um questionário. Para a realização da análise estatísticas foram separados dois tempos, onde o tempo 1 foram analisados os dados em relação ao início da mucosite oral e o tempo 2 em relação ao pior grau apresentado pelos pacientes. Foram incluídos 50 pacientes, com cerca de 78% dos pacientes do sexo masculino. A quimioterapia ($P = .034$) foi associada aos pacientes que apresentaram lesões de mucosite oral até a décima sessão de radioterapia. Diabetes ($P = .017$), dermatite por radiação ($P = .017$) e dermatite por radiação moderada ($P = .013$) foram estatisticamente associadas ao grau grave de mucosite no momento de seu início. Enquanto hipertensão ($P = .030$), diabetes ($P = .016$), alcoolismo leve e moderado ($P = .029$), dermatite por radiação ($P = .001$), odinofagia ($P = .022$), ardência bucal ($P = .003$), dificuldade de higiene ($P = .020$) e uso de opioides ($P = .045$) foram associados aos graus mais severos no momento da exacerbação da lesão. Fumantes severos foram associados à maior ocorrência de lesões de mucosite na região labial nos dois tempos. Este estudo apresentou prevalência significativamente em relação a mucosite oral induzida por radiação e o seu grau com as características clínico-patológicas e demográficas. Estabelecer hábitos de vida saudáveis e manter uma higiene oral saudável são essenciais na prevenção da mucosite oral.

Palavras-chave: câncer de cabeça e pescoço; mucosite; dor; características clínico-patológicas.

ABSTRACT

CARVALHO M. M. **Relationship between the degree of radio-induced mucositis in patients with head and neck cancer and clinical-pathological characteristics and demographics.** 2025. Dissertação (Mestrado) - Faculdade de Odontologia, Universidade Estadual Paulista (UNESP), Araçatuba, 2025.

Oral mucositis is an inflammatory process caused by the cytotoxic effects of antineoplastic treatments and is frequently observed in patients undergoing treatment of the head and neck region. It significantly impairs individuals and affects their speech, swallowing, and chewing. However, the etiopathogenesis of mucositis remains controversial. Factors related to treatment and the patient have been identified as factors that cause and modify changes in radio-induced oral mucositis. Thus, the purpose of this study was to evaluate the relationship between the degree of radiation-induced mucositis and the clinical-pathological and demographic aspects of patients during treatment for head and neck cancer. To conduct this study, patients diagnosed with head and neck cancer who underwent mandatory radiotherapy treatment were recruited. The patients were clinically evaluated daily and answered a questionnaire verbally. Two time points were separated for statistical analysis: Time 1 analyzed data regarding the onset of oral mucositis and time 2 analyzed data regarding the worst degree presented by the patients. Fifty patients were included, with approximately 78% of the patients being male. Chemotherapy ($P = .034$) was associated with patients who presented with oral mucositis lesions up to the tenth radiotherapy session. Diabetes ($P = .017$), radiation dermatitis ($P = .017$) and moderate radiation dermatitis ($P = .013$) were significantly associated with severe mucositis at the time of onset. Hypertension ($P = .030$), diabetes ($P = .016$), mild and moderate alcoholism ($P = .029$), radiation dermatitis ($P = .001$), odynophagia ($P = .022$), burning mouth ($P = .003$), difficulty with hygiene ($P = .020$) and use of opioids ($P = .045$) were associated with the most severe degree of lesion exacerbation. Severe smoking was associated with a greater occurrence of mucositis lesions in the lip region at two specific times. This study showed a significant prevalence of radiation-induced oral mucositis and its degree in relation to clinical-pathological and demographic characteristics. Establishing healthy lifestyle habits and maintaining healthy oral hygiene are essential for preventing oral mucositis.

Keywords: head and neck cancer; mucositis; pain; clinical characteristics; pathological characteristics.

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LISTA DE ABREVIATURAS E SIGLAS

BRA	Brazil
CAPES	Coordination for the Improvement of Higher Education Personnel
COB	Oral Oncology Center
CT	Computed Tomography
MRI	Magnetic Resonance Imaging
NY	New York
OM	Oral Mucositis
OSCC	Oral Squamous Cell Carcinoma
UICC	Union for International Cancer Control
UNESP	São Paulo State University
USA	United States of America
VAS	Visual Analog Scale
RTOG	Radiation Therapy Oncology Group
SD	Standard Deviation
SP	São Paulo
SPSS	Statistical Package for the Social Sciences
WHO	World Health Organization

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5 CONCLUSIONS

The interaction of clinical-pathological, demographic and bio-behavioral characteristics shows different behaviors depending on the stage of OM. Thus, in-depth knowledge about the relationship between OM and clinical-pathological, demographic and bio-behavioral characteristics is essential to reduce severe toxicity and increase the quality of life of individuals with head and neck cancer.

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