Oral mucositis evolution after nutritional intervention in cancer patients under palliative care*

Evolução da mucosite oral após intervenção nutricional em pacientes oncológicos no serviço de cuidados paliativos

Emanuela Medeiros Schirmer¹, Ariana Ferrari², Lilian Cristine Teixeira Trindade³

* Received from Hospital Erasto Gaertner. Curitiba, PR.

SUMMARY

BACKGROUND AND OBJECTIVES: Oral mucositis symptoms bring severe consequences to patients’ quality of life and may require partial or complete interruption of cancer treatment. This study aimed at evaluating oral mucositis evolution in cancer patients under palliative care after medical and nutritional intervention and orientation, in addition to analyzing how mucositis interferes with patients’ food ingestion.

METHOD: Participated in this study 23 patients under palliative care who answered questionnaires with questions regarding number of meals/day, meals consistency, drugs used, oral complaints and life habits. Patients were individually interviewed in the first visit and 15 days after by the physician and the nutritionist considering disease diagnosis and symptoms.

RESULTS: 65.2% of patients had mucositis grade I and 46.6% of them consumed solid food. 4.3% of patients had mucositis grade IV and all of them consumed liquid food. At return, 73.9% of patients had no mucositis and from them, 64.7% reported no restriction with regard to diet consistency. Dry mouth had the highest incidence at first visit (86.9%) being decreased to 34.7% at treatment completion. Candidiasis, diagnosed in 43.4% of patients was decreased to 13% after the intervention.

CONCLUSION: Oral mucositis is very common among cancer patients and the multiprofessional approach is critical for the efficient management of patients under palliative care, respecting their autonomy and quality of life.

Keywords: Nutritional physiology, Oncology, Oral mucositis, Palliative care.

RESUMO

JUSTIFICATIVA E OBJETIVOS: A sintomatologia da mucosite oral traz graves consequências para a qualidade de vida dos pacientes, podendo exigir interrupção parcial ou completa do tratamento antineoplásico. O objetivo deste estudo foi avaliar a evolução da mucosite oral em pacientes oncológicos atendidos pelo serviço de cuidados paliativos, após a intervenção e orientação médica e nutricional, além de analisar de que forma a mucosite interfere na ingestão alimentar dos pacientes.

MÉTODO: Foram avaliados 23 pacientes em cuidados paliativos, que responderam questionários com questões relacionadas ao número de refeições/dia, consistência das refeições, medicamentos em uso, queixas orais e hábitos de vida. As entrevistas foram realizadas no primeiro atendimento e após 15 dias. Os atendimentos foram realizados pela nutricionista e pela médica, de maneira individualizada, considerando o diagnóstico da doença e sintomas apresentados.

RESULTADOS: 65,2% dos pacientes apresentaram mucosite grau I e 46,6% destes consumiam alimentos de consistência sólida. 4,3% dos pacientes apresentaram mucosite grau IV com 100% destes deglutindo alimentos de consistência líquida. No retorno dos pacientes 73,9% não apresentaram mucosite e destes 64,7% referiram não ter restrições à consistência da dieta. Xerostomia foi que apresentou maior incidência no primeiro atendimento, 86,9% reduzindo para 34,7% no final do tratamento. A
candidiasis diagnosed in 43.4% of patients reduced for 13% after intervention.

CONCLUSÃO: A mucosite oral é intercorrência muito comum nos pacientes em tratamento oncológico e a atuação multiprofissional é fundamental para o manejo eficiente dos pacientes em cuidados paliativos, respeitando sua autonomia e qualidade de vida.

Descritores: Assistência paliativa, Fisiologia nutricional, Mucosite oral, Oncologia.

INTRODUCTION

Cancer is the second major cause of mortality in Brazil, being responsible for 13% of all deaths worldwide. An incidence of 518,510 new cancer cases is estimated for 2012 and from these, 90,940 will be in the Southern region. Every year, medicine brings new advances with regard to cancer management, however many patients only look for medical assistance when their disease is advanced, requiring specific therapeutic care for these patients who can no longer be cured. Patients under palliative care may have different symptoms associated to the disease or to the use of drugs and which directly interfere with food consumption, such as inappetence.

Oral mucositis is consequence of a local inflammatory process and cancer treatments, such as radiotherapy and chemotherapy for head and neck tumors, are a major cause of this disease. It is also related to the most important acute side-effect of oral radiotherapy. Mucositis pathophysiology is divided into 4 phases: inflammatory, epithelial, ulcerative and curative. In the inflammatory phase, the epithelial tissue releases interleukin 1 (IL-1), interleukin 6 (IL-6) and tumor necrosis factor alpha (TNF-alpha) increasing local vascularization. In the epithelial phase there is decreased cells renewal due to radiotherapy and chemotherapy, which ulcerate the epithelium. The ulcerative phase itself occurs when there is colonization by micro-organisms and intensification of lesions. Finally, there is the curative phase, corresponding to cell renewal followed by mucositis healing.

Oral mucositis symptoms bring severe consequences to patients’ quality of life. Major signs and symptoms are mucosal ulceration with severe pain, difficulty to eat, difficulty to talk and to make oral hygiene, and the presence of opportunistic infections. Severe oral mucositis may also require partial or total interruption of cancer treatment, such as radiotherapy, before the planned schedule is complete, increasing the risk of tumor cells proliferation and making difficult to control the disease. In patients under chemotherapy, mucositis in general appears in non-keratinized mucosa of the ventral face of the tongue, of mouth floor, of soft palate and also in the cheek mucosa.

In patients under head and neck radiotherapy, inflammation may affect both keratinized and non-keratinized mucosa. Alcohol and tobacco, chemotherapy, fungal infections and poor oral hygiene may increase the incidence or worsen mucositis.

Patients with oral mucositis may have odynophagia, leading to malnutrition, dehydration, bacterial and fungal infections, mood and sleep disorders. It is believed that chamomile (Chamomilla recutita) has anti-inflammatory properties in wound healing, bacteriostatic and antiseptic activities. There are evidences that chamomile essence has strong activity against Gram-positive and Gram-negative bacteria.

This study aimed at evaluating the evolution of oral mucositis in cancer patients under palliative care, after medical and nutritional intervention and guidance, in addition to analyzing how the severity of mucositis interferes with patients’ food ingestion.

METHOD

We have evaluated 42 patients, however 19 did not complete the study for not having clinical conditions to remain in the research. So, the study continued with 23 patients admitted to the outpatient setting of the Palliative Care Service, Hospital Erasto Gaertner (HEG). Sample was delimited according to the demand of oral mucositis patients from August 2010 to September 2011. All patients were informed about the study methodology and objectives and only those who agreed to participate by signing the Free and Informed Consent Term were included in the study.

Inclusion criteria were: cancer patients without curative possibilities, with oral mucositis, aged 18 years or above and functional capacity equal to or higher than 40% by the Karnofsky scale. Patients not agreeing to participate in the study or not meeting remaining inclusion criteria were excluded. Karnofsky scale is a tool to evaluate patients’ performance through physical ability and self-sufficiency, with scores varying from 10% to 100%.

Individuals with functional capacity equal to or below 40% by the Karnofsky scale were excluded for not having clinical conditions to follow medical and nutritional guidelines.

In the first visit, patients have answered a questionnaire with questions regarding the number of meals/day,
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RESULTS

From 23 patients, 13 were males (56.5%) and 10 females (43.4%). Mean age was 61 years varying from 24 to 85 years of age.

Most frequent neoplasias were urinary tract (26%), gastrointestinal tract (21.7%), gynecological (13%) and respiratory (13%), followed by head and neck tumors (8.6%) and skin tumors (8.6%). Breast cancer corresponded to 4.3% and hematopoietic system cancer to 4.3%.

As to the number of meals, 8.6% of patients had only two meals/day in the beginning of the treatment, decreasing to 4.3% at the end of 15 days. Three meals a day were taken by 17.3% of patients both before and after the intervention. Patients reporting four meals/day corresponded to 43.4% in the first visit and to 34.7% in the second evaluation. At the end of the intervention there were a higher number of patients having five meals/day, from 26% to 30.4%. There has been an increase in the number of individuals having six meals/day at the end of the intervention, from 4.3% to 13%.

During the first evaluation (Table 1) there has been grade I mucositis in 65.2% of patients and from them, 46.6% would eat solid food. From 17.3% with grade II mucositis, 50% had pasty food. Grade III mucositis was represented by 13% of patients, and from them 66% corresponded to patients with liquid ingestion and 33.3% with liquid-pasty ingestion. Only 4.3% of patients had grade IV mucositis and 100% of them had liquid food. At return, after 15 days of treatment and nutritional guidance, 73.9% of patients had no oral mucositis and from them, 64.7% referred no restriction to diet consistency. Medical approach was individualized considering disease diagnosis and symptoms. In the presence of candidiasis, in addition to dietary guidelines, 5 mL nystatin was prescribed, corresponding to 1000,000 UI every 6 hours for 10 days if mild or moderate infection, and 100 mg fluconazole/day for seven days if severe infection, followed by appetite loss with 47.8% and decreasing to 13% (p < 0.01), followed by appetite loss with 47.8% and decreasing to 13% (p < 0.05). Anorexia had the lowest difference between both visits (43.4% to 30.4%). Anorexia had the lowest difference between both visits (43.4% to 30.4%).
Table 1 – Grade of mucositis and diet consistency in first and second visits.

<table>
<thead>
<tr>
<th>Mucositis Classification</th>
<th>1st Visit</th>
<th>2nd Visit</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>% of Patients</td>
<td>Prevailing Diet Consistency</td>
</tr>
<tr>
<td>No mucositis</td>
<td>Zero</td>
<td>-</td>
</tr>
<tr>
<td>Grade I Mucositis</td>
<td>65,2%</td>
<td>Solid (46,6%)</td>
</tr>
<tr>
<td>Grade II Mucositis</td>
<td>17,3%</td>
<td>Pasty (50%)</td>
</tr>
<tr>
<td>Grade III Mucositis</td>
<td>13%</td>
<td>Liquid (66,6%)</td>
</tr>
<tr>
<td>Grade IV Mucositis</td>
<td>4,3%</td>
<td>Liquid (100%)</td>
</tr>
</tbody>
</table>

During first evaluation and after the intervention it decreased to 13%.
Oral cavity pain during first evaluation was classified as absent in 21.74% of patients, mild in 52.18%, moderate in 17.39% and severe in 8.69%. No patient had pain during second evaluation (p < 0.001).
With regard to previous cancer treatment in a period shorter than one year, 39.1% of patients received chemotherapy and 21.7% radiotherapy, however all patients had already interrupted these treatments for more than 30 days.
During the study, systemic antibiotics were used by 4.3% of patients, steroids by 69.5%, antifungal by 26% and anti-inflammatory drugs by 21.7%.
In terms of life habits, no patient has reported ingesting alcoholic beverages and 30.4% were tobacco-dependent during the treatment.

Table 2 – Patients’ oral complaints

<table>
<thead>
<tr>
<th>Complaints</th>
<th>1st Visit</th>
<th>2nd Visit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dry mouth</td>
<td>86,9%</td>
<td>34,7%</td>
</tr>
<tr>
<td>Disgeusia</td>
<td>60,8%</td>
<td>8,6%</td>
</tr>
<tr>
<td>Loss of appetite</td>
<td>47,8%</td>
<td>13%</td>
</tr>
<tr>
<td>Anorexia</td>
<td>43,4%</td>
<td>30,4%</td>
</tr>
<tr>
<td>Candidiasis</td>
<td>43,4%</td>
<td>13%</td>
</tr>
</tbody>
</table>

DISCUSSION
Palliative care services involve all types of tumors. So, results obtained with regard to types of cancer as compared to the grade of mucositis were not statistically significant in our study, probably due to the small number of individuals with each type of tumor.
Leukemia and lymphoma are examples of malignant tumors causing bone marrow suppression and tend to be more frequently associated to oral complications.
In our study, 31.7% of patients had previous chemotherapy and 27.7% previous radiotherapy. Cancer patients very often start their treatment with the association of therapies such as surgery and/or radiotherapy and/or chemotherapy.
Treatment-related factors, such as type of radiation, drug used and daily doses are generally described with regard to their effects on normal tissues. Age, clinical and dental status are factors inherent to each patient and have been associated to the presence of oral mucositis.
Our study has observed that a few number of patients had six meals a day in the beginning of the treatment, increasing to 13% at the end of the intervention. These data are in line with the literature according to which oral mucositis affects basic human activities, such as food ingestion and communication, and may impair interpersonal and social relationships.
In our study, most patients who started the treatment with grade I mucositis did not need changes in diet con-
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Oral mucositis is very common among cancer patients and a multiprofessional intervention is critical for the efficient management of palliative care patients, respecting their autonomy and quality of life.

REFERENCES

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