

Why do we treat mouth cancer in advanced stages?

Por que tratamos câncer de boca em estádios avançados?

João Marcos Arantes Soares¹, Gustavo Waldolato Silva², Leonardo de Queiroz Gomes Belligoli², Louise Lanna Nunes², Pedro Messeder Caldeira Bretas², Severino Correia do Prado Neto², Viviane Bigodeiro dos Santos²

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ABSTRACT

In Brazil, hospital cancer records reveal the mouth as the eighth most frequent location of malignant tumors, most of them being diagnosed at advanced stages. In developed countries, diagnosis of late rates is about 40%. Early diagnosis and treatment represent increased chances of a cure, low cost, and less morbidity. This article aims to assess the possible reasons for delays in the diagnosis and treatment of oral cancer and reflects on the reasons. The terms mouth neoplasias, diagnosis, epidemiology, and therapy were introduced in the MEDLINE, LILACS, and SciELO databases. A total of 31 studies published between 1995 and 2011 were analyzed, which discoursed about the delayed diagnosis in relation to patients, professionals, and healthcare systems. It was observed that the diagnostic delay was associated with: a) patients: single, alcoholic, and afraid of the diagnosis; b) Professionals: little knowledge on the subject and high workload; c) healthcare systems: queues for medical care, distance between the patient's residence and healthcare units and reference centers, and negative experiences in the healthcare service. It is critical to understand the possible causes of delay and limitations of healthcare services and its professionals for appropriate actions to take place individually and collectively providing early diagnosis and treatment to these patients.

Key words: Mouth Neoplasms; Mouth Neoplasms/diagnosis; Mouth Neoplasms/ epidemiology; Mouth Neoplasms/therapy.

RESUMO

No Brasil, registros hospitalares de câncer revelam a boca como a oitava localização mais frequente de tumores malignos, sendo a maioria delas diagnosticada em estágio avançado. Em países desenvolvidos, as taxas de diagnóstico tardio são cerca de 40%. O diagnóstico e tratamento precoces representam mais chance de cura, baixo custo e menos morbidade. Este artigo objetiva verificar as possíveis razões de atraso no diagnóstico e tratamento das neoplasias bucais e refletir sobre os seus motivos. Os termos neoplasias bucais, diagnóstico, epidemiologia e terapia foram introduzidos nas bases de dados MEDLINE, LILACS e SCIELO. Foram analisados 31 estudos, entre 1995 e 2011, que discorriam sobre o atraso diagnóstico em relação ao paciente, ao profissional e ao sistema de saúde. Observou-se que o atraso diagnóstico associou-se a: a) pacientes: solteiros, etilistas e com medo do diagnóstico; b) médico: pouco conhecimento sobre o assunto e alta carga de trabalho; c) sistema de saúde: filas para atendimento médico, distância de unidades de saúde e centros de referência da moradia do paciente e experiências negativas no serviço de saúde. É fundamental entender as possíveis causas de atraso e limitações dos serviços de saúde e de seus profissionais para que medidas adequadas sejam tomadas individual e coletivamente para propiciar diagnóstico e tratamento precoce aos pacientes.

Palavras-chave: Neoplasias Bucais; Neoplasias Bucais/diagnóstico; Neoplasias Bucais/ epidemiologia; Neoplasias Bucais/terapia.

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Institution:
Medical School at UFSJ
Divinópolis, MG – Brazil

Corresponding Author:
João Marcos Arantes Soares
E-mail: jmarcosccp@uol.com.br

INTRODUCTION

Cancer is the third leading cause of death in worldwide populations, being surpassed by infectious parasitic and cardiovascular diseases. It accounts for more than six million deaths every year, about 12% of all causes of death in the world.¹

In Brazil, hospital cancer registries show that the mouth is the eighth most frequent site of malignant tumors, being the most predominant in the head and neck region excluding the skin. The death rate from oral cancer in Brazil is among the highest in the world² and the incidence rate in 2010 was 14,120 new cases.³ It is among the six and seven types of the most common cancers in males and females, respectively. In addition, over 90% of individuals affected by oral cancer are over 55 years of age.⁴

In 2008, 6,214 people – 4,898 men and 1,316 women – died from oral cancer.³ In Brazil, as in developing countries, most of the lesions, in approximately 73% of cases, are diagnosed at advanced stages. In developed countries such as the United States, late diagnosis rates are about 40%.³

Patients diagnosed and treated in advanced stages have worse survival prognosis than those in initial stages.⁵ In addition to lower overall survival, delays in diagnosis result in increased suffering due to possible physical disfigurement resulting from extensive surgical resections, limitation of mouth functions, and high health costs.^{6,7}

Several reasons contribute to the late diagnosis of oral cancer, and of course, its treatment in advanced stages such as: ignorance and lack of awareness by the patient of signs and symptoms; ignorance about risk factors; absence of routine clinical mouth examination by health professionals; and lack and/or insufficient medical and dental care.

Why cancer of the oral cavity, in our midst, is approached with such contempt? The treatment in advanced stages and, consequently, the worst prognoses depend on the patient who only seeks treatment after advanced tumor stages have developed; or is his ac-

cess to health services limited? Is there a delay in effective treatment start even after a diagnosis in time?

There are many variables that arise in the path to be traversed by the patient, from the onset of lesions to treatment, which may decidedly interfere in the prognosis (Figure 1).

The purpose of this article is to verify the possible causes in the delayed diagnosis and treatment of patients with Squamous Cell Carcinoma (CCE) of the mouth and to reflect on what grounds, in Brazil, patients are treated in advanced stages rather than early stages.

MATERIAL AND METHODS

A literature review was conducted in the MEDLINE, LILACS, and SciELO databases from January of 1995 to April of 2011. The terms used were: mouth neoplasms AND [diagnosis] OR [epidemiology] OR [therapy]. A total of 5,747, 291, and 88 articles were found; and 28, 1, and 1 were selected from MEDLINE, LILACS, and SCIELO, respectively. The article selected in SCIELO was also listed in MEDLINE.

The criteria for selecting articles were:

- language: Spanish, English, and Portuguese;
- referent to delayed diagnosis and treatment;
- mentioning times between clinical presentation, diagnosis, and treatment.

All selected articles were about the late diagnosis. The approach of the period between diagnosis and treatment was not found.

RESULTS

The causes of delay were attributed to three possible reasons: a) delay seeking care; b) lack of preparation of health professionals for diagnosis and referral; c) health system established: few referral services able to treat tumors of the oral cavity and/or geographically not well-distributed.

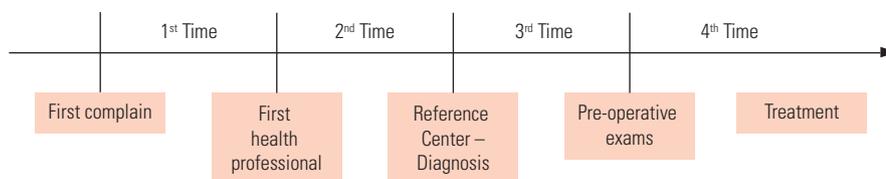


Figure 1 - Patient route from the appearance of lesions to treatment.

Delay related to the patient

The patient-related factors can be divided into socioeconomic, demographic, cultural, psychosocial, and clinical factors.

- **socioeconomic, demographic, and cultural factors:** Scott et al.⁸, when analyzing demographic variables found that blacks are at increased relative risk of being diagnosed at advanced stages when compared to whites. Gómez et al.⁹ found that patients younger than 45 years old delay seeking aid because they are not in the age group of risk for oral cavity cancer.

Another determinant reason of delay is marital status. Scott et al.⁸ found that married people are diagnosed at an earlier stage while those living alone are more likely to present advanced tumors. Alcoholic patients take longer to seek medical care than the general population, and, this time, is directly proportional to the degree of alcoholism. Smokers seek medical attention sooner than former smokers, and these, sooner than non-smokers.^{9,10} The use of herbal medicines and self-medication are associated with the diagnosis of lesions at late stages.^{11,12} Precarious socioeconomic status and low cultural development are more related to delay in diagnosis than the general population.¹¹ People with more knowledge about oral cancer seek assistance earlier than those without this knowledge.^{12,13} The high costs of treatment and necessary procedures also represent a reason for delay.⁷

- **psychosocial factors:** the various feelings present in the patient can interfere with the search or not for medical assistance based on the perception of lesions. The delay in the search for health services may be related to anxiety, fear of diagnosis, the stigma of cancer; belief in a rapid and spontaneous resolution of the problem; and denial about coping with the problem.^{14,15} Patients who misinterpret their signs and symptoms and devalue their complaints, not considering them worthy to take up the time of doctors, increase the diagnosis delay.¹⁶ The risk of late diagnosis can also be determined by the inconvenience felt by the patient to go to a consultation and disbelief in the proposed treatment.¹⁶ Postponing the search for health services is also determined by previous negative experiences in reference centers credited to low treatment efficiency, postponing its start.¹⁶ Some circumstances experienced by

the patient such as comorbidities, marital conflict, and need to care for younger children also delay the early diagnosis and/or treatment.¹⁶

- **clinical factors:** the tumor presenting features are key factors for diagnosis, treatment, and prognosis of oral cancer. The absence of signs and symptoms and slow tumor growth are related to delays in seeking assistance.¹² Lesions in more exposed areas, such as lip and tongue, are associated with an early search for medical attention when compared to lesions in less exposed areas.^{13,15} Smaller tumors, difficult to identify, and symptoms not attributed to cancer are associated with delays in seeking medical care.¹³ Onizawa et al.¹⁷ found that patients presenting ulcers or white lesions as their first complaint took longer to be referred to the health system than those with pain or edema. Gomez et al.¹², however, found that nonspecific inflammatory signals are more related to delay in demanding attention in the health system.

Delays related to health professionals

The health professional plays an important role in the delayed diagnosis because he has the first contact with the patient with the initial lesion. This delay can be associated with: low level of knowledge by the professional and difference in knowledge between different professionals and work overload with a consequent absence in performing a full examination of the oral cavity and tumor presenting features. Many professionals are unaware of the major risk factors and symptoms of oral cancer,¹³ which determines errors in diagnosis with prolonged treatment that is not related to cancer.¹⁵ Patton et al.¹⁸ found that 31% of dentists had from medium to high knowledge level on risk factors and diagnostic criteria for oral cancer. Macpherson et al.¹⁹ found that 85% of doctors and 63% of dentists did not have the confidence or moderate confidence in detecting premalignant or malignant lesions. In the same study, 42% of doctors and 32% of dentists considered trauma as an important risk factor. Only 3% of dentists routinely questioned the use of alcohol in order to identify patients at risk of oral cancer. The lack of knowledge is also evident because 91% of doctors and 92% of dentists desired more training in the detection of oral cancers.¹⁸ Another crucial factor for an early detection is the experience of the professional in handling the cancer.¹³

It was observed in the United States that, graduation in the past 20 years, the performance of more frequent biopsies and referrals of patients, and prior contact with information about oral cancer among dentists were associated with more knowledge about risk factors and diagnostic concepts for oral cancer. The limited experience of health professionals promotes errors in the conduct and excessive and unnecessary referrals;¹⁹ without considering that the passage through various health professionals delays further and definite treatment.¹⁹ Another relevant aspect is the training of the professional who will have the initial contact with the patient. This relationship is still controversial but should be taken into account. There are conflicting reports regarding the delayed diagnosis in relation to the merits of referral of patients with oral cancer, noting that dentists do so in earlier stages more often than physicians; however, with more delays than general surgeons or dermatologists.^{17,21}

Patients who were approached by a doctor who was in contact with the hospital had more lesions in early stages at diagnosis compared to those who were cared by a general practitioner doctor.¹⁵ There seems to be a relationship between professional expertise and a short delay in diagnosis.²¹ The explanation for this fact may be the presence of those experts closest to the hospital and of course, facilitated referral of patients.²⁰ The complete physical examination of the patient by the health professional is very important.

Patients attending the service with different head and neck complaints are diagnosed at earlier stages;¹² however, the ideal physical examination is not what is observed in practice. Physicians report that the lack of time for consultations results in the greatest difficulty for an early diagnosis in 43% of the times.²⁰ Wei Gao and Guo¹⁶ observed that the excess in the number of consultations is related to non-performance or the performance of incomplete clinical mouth examination. Some tumors have characteristics that somehow lead the health professional not to identify the lesion in the primary stage. Different sites of lesions are related to different delayed diagnosed times.¹⁸

Delays related to the health system

The delay in the early diagnosis of oral cancer may also be associated with the health system, whether by its precariousness, geographical barriers that hinder access, or system failure to attend patients' demands

for services. While this aspect is extremely important for more than just an early diagnosis and treatment, there are not many references on this topic, which indicates the need for further studies in this area.

There are still some regions without health care, and patients from these sites tend to be diagnosed late.¹³ There is low quality of provided service elsewhere.^{15,16}

Gomez et al.¹² and Scott et al.¹⁵ showed that reference services located in remote regions to patients' homes are also associated with increased delay in diagnosis, which can be justified by the difficulty of access to health professionals.¹⁵

It is also very common that patients need to stay in long lines throughout their journey in the health system, which results in the evolution of the initial tumor into more advanced stages. The delay in releasing and scheduling preoperative examinations and the slowness in scheduling operating rooms also delay the completion of effective treatments.²²

In Brazil, most of the experts in head and neck surgery are in the Southeastern and Southern regions with large demographic gaps in other regions.²³

CONCLUSION

The path taken by the patient seeking health care highlights the possible causes of his delayed treatment. More than an early diagnosis, early treatment should be provided for an effective impact on the morbidity and mortality of oral cancer. The possible causes of delay in the diagnosis and management error in health services, and their professionals needs to be evaluated. Treatment of patients at advanced stages may stem from three basic causes, i.e., patient, professional, and health service. If the greatest responsibility is on the patient, health education measures may be taken; if it is due to flaws in the quality of care, managers can develop public policies aimed at prevention and early detection of oral cancer by training professionals; and if it is caused by the operationalization of treatments after diagnosis, measures to improve service coverage, investments in infrastructure, or purchase of equipment could be executed as along with the expansion of the local treatment network.

Importantly, each population has cultural and socioeconomic characteristics that are peculiar, thus, the way health systems are organized in each region in Brazil is different. Therefore, different measures should be taken at each site according to its specificities. How-

ever, the ultimate goal should be the same among all: the enhancement of the quality of life and patient survival based on early diagnosis and treatment.

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