# Delay in the Diagnosis of Maxillofacial Malignant Tumors

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**PROFESSIONAL PAPER**

SUMMARY

Introduction: Early diagnosis is the key to a good prognosis in treatment of maxillofacial malignant tumors and diagnostic delay can lead to metastasis and to adverse health outcomes. Delay can be classified to the: delay associated with patient and as delay associated with the healthcare professional. **Aim**: The aim of this study was to show importance of early detection of maxillofacial malignant tumors and establishing doctrine in diagnostic procedure. Patients and methods: In this 10 years retrospective study were evaluated 146 patients with diagnosed maxillofacial malignant tumors. **Results**: We find out that most of the patients after became aware of symptoms visited phyisician within 2 months (42%), within 6 months 25 % of patients visited physician, 20% in a period between months and one year, and still there is about 13 % of patient who shows up after more than a year. In this study 70 patients examined by specialist two weeks after their first visit to the doctor, 58 patient were under some treatment (diagnostic or therapeutic) in primary care first month and 18 patients stayed under some kind of treatment without specialist examination more than a month. Testing delay was 9 days median between completion of tests and presentation to the board. In this study average treatmant delay lasts 3 days. **Conclusion:** Against delay of treatment is very important education of population, mobilizing healthcare professionals, the most important point in wich we can reduce delay and not waste precious time is not to use inappropriate diagnostic and terapeutic tehnique, but to refer the patients in referral center where will be implemented appropriate diagnostic procedure.

**Keywords: maxillofacial malignant tumors, early diagnosis, patient delay, professional delay.**

## 1. INTRODUCTION

The global incidence of maxillofacial malignant tumors is about 500,000 cases per year with mortality of 270,000 cases per year (1). The annual incidence of oral cancer in the United States is approximately 30,000 new patients, with close to 9,000 deaths per year (2, 3, 4).

Early diagnosis is the key to a good prognosis and diagnostic delay can lead to metastasis and to adverse health outcomes (5, 6, 7, 8). According to Andersen and Cocioppo's delay can be classified in the 5 stages: Appraisal, Illness, Behavioral, Scheduling, Treatment (9). Simplify delay can be classified to the: delay associated with patient and as delay associated with the healthcare professional. Definition of professional delay includes the time between the patient entering professional care and the start of definitive treatment (11).

Professional delay include differentiated malignancies from traumatic or inflammatory oral lesions (this period of follow up patient,before physician refer patient to the specials is termed „refferal delay"). If this period lasts two-week is not considered delay, but sometimes is prolonged because of false teraphy (treatmant with antibiotics, oral antiseptic), use of adjunctive technologies that have limited utilization, or use of diagnostic procedures which lead to false diagnosis and prolonged professional delay. Factors that can lead to further referral delays are location of the lesion (not easily visible) and appropriateness or accuracy of the referral (10, 11,12, 13). From the time when patient has met specialist comming testing delay. This is the time it takes for the patient to go for the necessary tests ordered by the specialist. After finishing diagnostic procedures and the cancer team has seen the patient case a definitive diagnosis is made and treatment is planned. This is the point where professional delay doesn't ends, but starting delay during the treatment phase, wich can have impact at the outcomes (10).

## 2. PATIENTS AND METHODS

In this retrospective study were evaluated 146 patients with diagnosed maxillofacial malignant tumors admitted to Clinic of Maxillofacial surgery, Clinical center of University of Sarajevo, Bosnia and Herzegovina from 2001th to 2011th year. **All data** are **collected** through a review of patients **medical** records.

## 3. RESULTS

We found out that from 146 patients 61 examined by a physician within two months since symptoms occured, 36 patients decided to visit a physician after a two months but before 6 months passed from the fist symptoms, 29 patients came to the doctor after more than a 6 months, and 20 patients shows up one year after became aware of symptoms

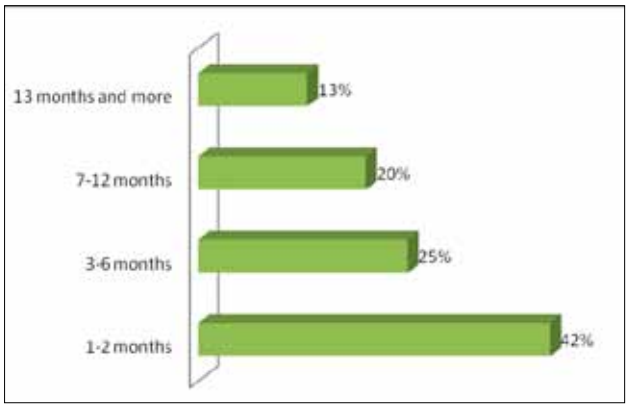


Figure1. Delay associated with patients

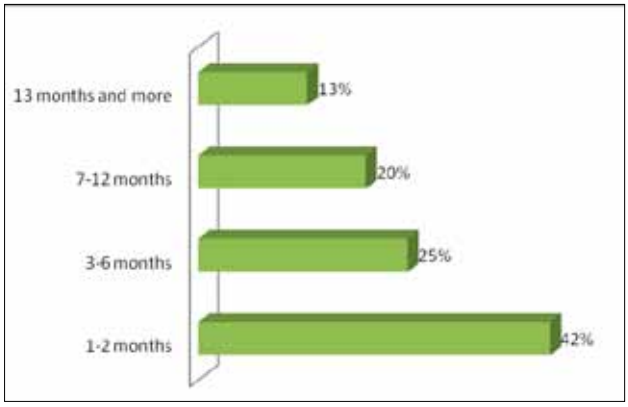


Figure 2. Professional delay

(Figure 1). In this study 70 patients examined by specialist two weeks after their first visit to the doctor, 58 patient were under some treatment (diagnostic or therapeutic) in primary care first month and 18 patients stayed under some kind of treatment without specialist examination more than a month (Figure 2).

Testing delay was 9 days median between completion of tests and presentation to the board. In this study average treatmant delay lasts 3 days.

## 4.DISSCUSSION AND CONCLUSION

The average time period of patients delay varies in different populations and studies. It has been estimated that about 50% of patients with oral cancer make a first visit to a healthcare professional within 1-2 months after first symptoms shows up while about 20-30% of patients delay seeking help for more than 3 months (14,15,16,17). The similar situation was in our study, where 42% of patient visited doctors within 2 monts, and 25% in a period of 2 to 6 months. Some stuides didnt find association between patients delay and patient's general education level but find strong association between the patient lack of knowledge about head and neck carcinoma and delay (18).

Reasons related to the patients delay except lack of knowledge are lack of understanding of maxillofacial tumors, inability of identifying symptoms, distance from health care facility, insurance approval process, lack of easy access to healthcare professionals ect(10).

Some research find out that the type of healthcare that patient seeks for the first visit has a an infulence on professional delay. Some study find out that primary care physicians are more often called to evaluate patients with suspicious lesions than dentists. In a studies in England, 56% and 65% of the patients evaluated for oral cancer were referred by primary care physicians, compared to only 36% and 27% from dentists (8,19). There are some opposite findings of Scully et who reported that dentists were responsible for 41% of referrals compared to 28% for primary care physicians (20).

The location of the oral cancer lesion also is a potential factor for referral delay. Lesions of the lip, buccal, and lingual surfaces are easy to see, but lesions inside maxillofacial cavity and hypopharynx are harder to spot. In one study was confirmed that most physician delay was due to location of the lesions (10). Some study shows that majority of oral cancer patients with delay (as many as 74% of patients in one study) will be given some sort of treatment that is not related to their malignancy (mouthwash, antibiotics, analgesics and tooth or denture adjustment (21). It is also very important that a referral is made to the correct specialist. Several studies agree that incorrect referrals lead to further referral delays (11, 22, 23).

In this study average testing delay was 9 days. Compareing with other studies where founded from shortest to longest, testing delay was four days median in a study done by Scully, six days median in a study by Onizawa,10.1 days mean in a study by Peacock and two weeks in a study by Amir (20, 24, 25, 15). In some studies was showed that overall professional delay from inital visit to start of treatment increasing by years, and this phenomenon is attributed to difficulty in getting tests done in the pathology and radiology departments(26).

Against delay of treatment is very important education interventions among population, especially crucial is education hight risk groups.

In early detection of maxillofacial malignant tumors crucial is mobilizing healthcare professionals, general practitioners and dentist to detect lesions early through properly examinations.

After verifying lesions maybe the most important point in wich we can reduce delay and not waste precious time is not to use inappropriate diagnostic and terapeutic tehnique, but to refer the patients in referral center where will be implemented appropriate diagnostic procedure.

Understanding root causes of diagnostic delay is crucial for the managment of patients with maxillofacial malignant tumors and for improvement of prognosis and quality of life.

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