

## A Case of a Large Irritation Fibroma - Etiology, Diagnosis and Treatment in a Patient

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**Received:** August 12, 2024; **Published:** September 03, 2024

### Abstract

**Aim:** The aim of this article is to represent a case of a large irritation fibroma on the maxillary arch, its etiology, diagnosis and treatment.

**Case Report:** A 67-year-old patient came to the University Dental Clinical Centre "Ss. Panteleimon" in Skopje with a pathological formation localized in the upper jaw at the residual alveolar ridge. She had been wearing old broken total dentures for 34 years. The formation was surgically removed and it was diagnostically confirmed that it is an irritation fibroma. New total dentures were manufactured.

**Results:** The patient was suffering from the broken sharp edges of the denture, and as a result of constant long-term irritation, pathological formation was formed. The patient had many accompanying systemic disorders, putting her oral health second, but still had a good immune system. The surgical wound from removing the irritation fibroma was healing properly. Preventive examinations and regular controls must be carried out at least twice a year for proper managing of the patients' oral health.

**Conclusion:** The organism has protective mechanism from irritation of foreign bodies in the mouth by forming benign tissues, depending on the immune system. Timely preventive measures must be taken in consideration for the benefit of the entire health of the patient.

**Keywords:** Irritation Fibroma; Broken Dentures; Regular Controls; Immune System

### Introduction

Irritation fibroma as its name says, is a fibroma caused by irritation factors, such as sharp edges, biting and chewing of the oral tissues during parafunctional habits. It is usually represented as a benign pathological outgrowth of the oral mucosa and in edentulous patients on the residual alveolar ridge [1].

Patients that wear dentures that are overextended, fractured, or with problems of the denture base experience oral pain that can sometimes lead to pathological formations such as fibromas and they represent inflammatory response of the body [2].

**Citation:** Vesna Ambarkova., et al. "A Case of a Large Irritation Fibroma - Etiology, Diagnosis and Treatment in a Patient". *EC Dental Science* 23.9 (2024): 01-07.

The term “denture fibroma” describes the presence of an inflammatory hyperplastic reaction by chronic stimulus [3].

Fibromas are benign tumors that are composed of fibrous connective tissue, and are usually localized on the buccal mucosa, gingiva and tongue [4]. However clinically there have been noticed other localizations. Is it well known that the oral cavity does not tolerate anything that is sharp, or that is not bio tolerant according to the worldly known ISO standardization for safety dental materials in the patients’ mouth. There are many chemical substances that can be harmful in terms of thermic, chemical reactions from the monomer of the dentures. When the immune system comes in contact with foreign bodies in the mouth a protective reaction is formed, sometimes by creating benign formations [5].

### Aim of the Study

The aim of this article is to represent the etiology, diagnosis and treatment of a case study of an irritation fibroma in a 67 year old patient.

### Case Report

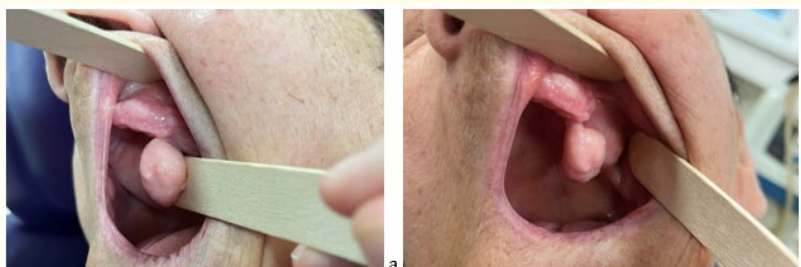
For the purpose of this study, a 67 year old female patient came to the clinic for removable dental prosthetics, for manufacturing of new dentures.

The patient was questioned for her previous medical history where she stated that she had open heart surgery and she had implantation of a heart stent. She was in a stable condition when she began with her dental treatment.

From the dental anamnesis the patient had said that she had been wearing dentures for 40 years. After six years of the manufacturing of her dentures she fell and her upper denture was broken. She did not have health insurance and was financially not able to repair her upper denture.

Twelve years ago she noticed a pathological formation near her upper denture, however she didn’t do anything about it, she did not visit dental specialists.

When performing extraoral examination, there were no changes that were worth noticing. However when the intraoral examination was carried out a pathological formation was seen (Figure 1a and 1b) hanging on a small petal, and the patient was referred to the Clinic for Maxillofacial surgery.



**Figure 1:** Figure 1a: Lateral intraoral view of the irritation fibroma. Figure 1b. Anterior intraoral view of the irritation fibroma.

The analysis of the patient in this study included cardiological examination, complete analysis and also blood analysis. The patients' old dentures were analyzed and the irritation fibroma was found near the broken edges of the upper denture (Figure 2a and 2b).



**Figure 2:** Figure 2a: The old broken upper denture palatal view. Figure 2b: The occlusal view of the upper denture.

The irritation fibroma was surgically removed and was sent to a pathohistological analysis (Figure 3).



**Figure 3:** The removed irritation fibroma.

After the surgery the pathological formation was sent to pathohistological analysis with the usage of PHA method in paraffin blocks which showed the detailed results. After healing of the wounds the patient had a new pair of total dentures manufactured (Figure 4a and 4b).

### Results

The patient in this study was operated successfully with complete removal of her irritation fibroma. The definitive diagnosis of the tumorous masses was found to be benign and this was confirmed pathohistological (Figure 5a and 5b).



Figure 4: Figure 4a: The patient with new dentures. Figure 4b: Occlusal view of the new dentures.

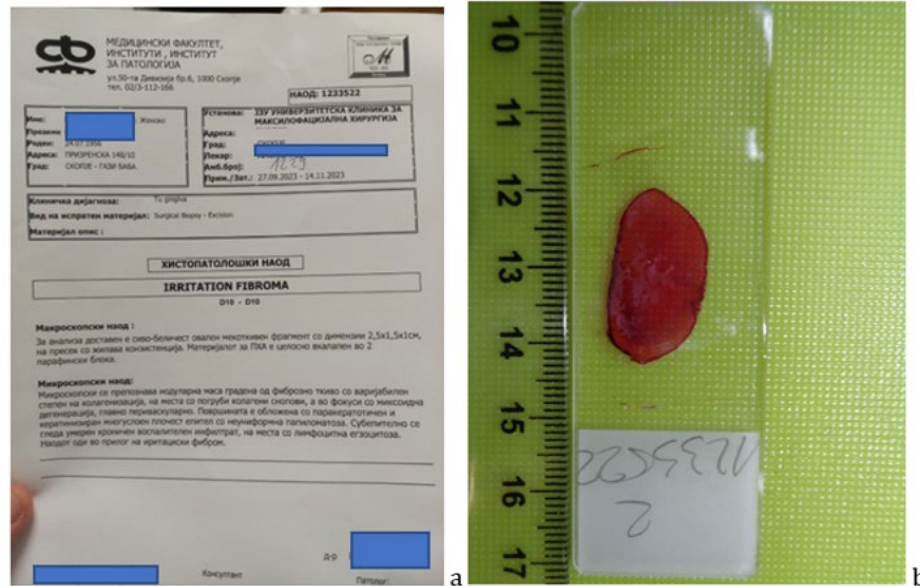
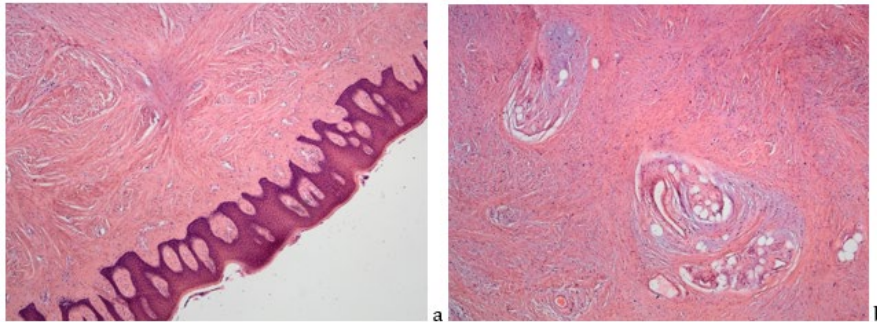


Figure 5: Figure 5a: Pathohistological results from the patients' irritation fibroma. Figure 5b: The dimensions of the irritation fibroma.

The surgically removed material was evaluated with dimensions 2.5 x 1.5 x 1 cm as a clinical finding. The macroscopic analysis confirmed grey-white soft tissue fragment. The detailed analysis was obtained with PHA methodology. Microscopic analysis showed nodular masses formed out of fibrous tissue with variable degree of collagenization, at places with rougher collagen parts, and in focuses with myxoid degeneration, mainly perivascular. The surface was covered with peri keratotic and keratinized multilayered squamous epithelium with ununiform papillomatosis. Aa chronic inflammatory infiltration was confirmed, at places with lymphocyte exocytosis in the subepithelial area, confirming the diagnosis irritation fibroma (Figure 6a and 6b).



**Figure 6:** Figure 6a: Microscopic photograph of the surface of the irritation fibroma. Figure 6b: Microscopic analysis showing nodular masses.

The patient was not treated with any additional surgical procedures. In the prosthetic treatment, classic acrylic dentures were manufactured with respect to the principles of designing dentures from classic impressions, proper intermaxillary relations and creating the acrylic dentures. The patient followed for a period of six months showed successful therapeutic approach and management of the condition of her oral health and thus her systemic health. The medical history of heart disease of the patient in this study was not connected with her dental status. The medical and dental team made a successful recovery of the patient.

## Discussion

Irritation fibroma is a finding in everyday clinical practice. As therapists we usually notice presence of irritation fibroma in places where the patient continuously acts in terms of parafunctional habits by chewing the oral mucosa. Besides the most common localization such as the buccal mucosa, residual alveolar ridge, Tsikopoulos, *et al.* have discovered a case with irritation fibroma on the hard palate in the maxilla [6].

With the recommendations from the World Health Organization, and American Dental Association, patients must be regular on their dental controls at least twice a year [7].

Patients especially with other medical conditions put their oral health in second plan. Sometimes they bare pathological formations that do not cause pain, but are not comfortable and can influence on how the patients feed themselves. This can lead to trauma, self-injuries, unsuitable mastication, and directly influencing the digestive system. When patients are referred for prosthetic rehabilitation a detailed pre prosthetic dental plan must be conducted, also stated by Grace, who suggests screening for oral cancer and pre-cancer in the dental practice for prosthetic treatment of the edentulous patient [7]. This will enable the dental practitioners to develop an attitude that will successfully rehabilitate the oral health of the patient. Irritation fibromas are a clinical finding of neglect of patients' oral health. In this case study the patient was in need for a surgical removal of the fibroma. Since fibromas are not very rare, what was mostly interesting in this particular study was the dimension of the fibroma. Because of the dimensions of the tumorous formation immediate detailed analysis were performed. In the literature, not many studies can be found in this field yielding the proper etiology, diagnosis and treatment. Usually, it is known where these formations form and it is mostly as its name says because of irritation, trauma chewing of the buccal mucosa, which was also a finding of Halim, *et al.* who made research on the prevalence of irritation fibromas for a 4 year period of time [8]. Every irritation of the mouth such as chronic repeated irritation from bruxism or micro trauma can lead to pathological formations of tissue.



Also, chronic irritation from sharp edges of the prosthetic devices can lead to different kinds of irritation, causing development of formations that usually must not be present there. In this case on the intraoral examination was discovered something therapists do not see in their everyday clinical practice. The size of the tumorous formation led the therapist to suspicion of swollen neck lymph nodes. The lymph nodes were in their normal diameters.

Valério, *et al.* have discovered that these formations usually are asymptomatic and patients do not visit medical and dental specialists, until they grow a certain size. The removal of the irritation fibroma enabled the patient in this study a better usage of the new dentures and more comfortable feeling in the mouth while speaking, breathing and chewing with the new dentures. The period of following after 9 months did not show any other changes such as recidivism, which is in correlation with the findings of Valerio, *et al.* that once the irritation fibromas are removed, they rarely cause recidivism [9].

This study is a huge reminder that as therapists we must take many actions to motivate, educate and convince older patients that are with total edentulism to visit the dental therapist at least twice a year and to take care of themselves besides their gender, age or other problems. Any atypical formation in the mouth can be caused by certain factors even by a simple dental cavity filling. The regular dental checkups must be detailed, followed by meticulous attention to anything atypical in the oral cavity. This can only be achieved by following the protocols for extraoral and intraoral examination as in our patient and furthermore to write down any noticeable change in the patients' dental charts in the periods for provided dental visit controls.

Every patient must be treated by respecting the Oath of Hypocrite that we refer to as professionals and in some aspects of our clinical and scientific work to raise awareness on some conditions, that can remain undetected or undertreated for a long period of time. Every single patient must be treated the same and by respecting the entire dental protocol based on evidence.

### Conclusion

Irritation fibroma dimensions clinically discovered and pathohistological confirmed is a clinical finding in the oral cavity that can cause problems in the oral and systemic health of a patient. Usually, neglected cases that have very rare dental visits can develop outgrowths of tumorous tissue caused by irritation factors and that is why they are named irritation fibroma. The conscience of the patients must be influenced by dental professionals by raising awareness of the possible pathological formations that need to be removed on time so that the patients can improve the quality of their oral and thus of their systemic health.

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**Volume 23 Issue 9 September 2024**

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