Scientific Research Publishing

Open Journal of Stomatology, 2025, 15(3), 39-49
https://www.scirp.org/journal/ojst
ISSN Online: 2160-8717
ISSN Print: 2160-8709

Management of a Giant Myxoma of the Oral Floor at Cocody Teaching Hospital: About a Case

Konan René Kouakou*, Mamadou Atigou Baldé, Ahi Morel Chapo, Kader Morel Diarra, Aké Jonathan Lucien Yapo, Amadou Lamarana Diallo, Brice Anderson Youmbi, Koffi Laurent Boka, Konan Marc Koffi, Bakary Ouattara, Raphiou Diallo

Oral and Maxillofacial Surgery Department of the Cocody Teaching Hospital, Abidjan, Côte d'Ivoire
Email: *rkouak1@gmail.com, doctatigou301@gmail.com, chapoahi17@gmail.com, diarrakhadermorel11@gmail.com, yapojonathan125@gmail.com, aldiallo2590@gmail.com, brice_youmbi@yahoo.fr, bokalaurent@ymail.com, marckoffi@ymail.com, bak_watt@yahoo.fr, rafioumajid@yahoo.fr

How to cite this paper: Kouakou, K.R., Baldé, M.A., Chapo, A.M., Diarra, K.M., Yapo, A.J.L., Diallo, A.L., Youmbi, B.A., Boka, K.L., Koffi, K.M., Ouattara, B. and Diallo, R. (2025) Management of a Giant Myxoma of the Oral Floor at Cocody Teaching Hospital: About a Case. *Open Journal of Stomatology*, **15**, 39-49.
https://doi.org/10.4236/ojst.2025.153003

Received: January 27, 2025
Accepted: March 24, 2025
Published: March 27, 2025

Abstract

Introduction: Myxoma of the floor of the mouth is a rare variety of myxomas of the jaws belonging to the large group of benign tumors of the jaws. Myxoma of the floor of the mouth is a soft tissue myxoma which is opposed to intraosseous myxoma in the maxillofacial sphere. This is a rare tumor whose characteristics are not perfectly defined. We report a case of giant myxoma of the floor of the mouth whose location and size are atypical, posing a diagnostic and therapeutic problem. The aim of this article is to contribute to the knowledge of myxoma by describing the clinical appearance and the therapeutic approach of a giant myxoma of the floor of the mouth. **Observation:** A 28-year-old patient, a carpenter, residing in a rural area consulted in March 2024 for a large oral mass which had evolved over the past 22 years, causing eating and speaking difficulties. The clinical examination and the maxillofacial scan revealed a large, benign-looking tumor of the floor of the mouth, filling the oral cavity. Tumor excision was performed after intubation by tracheotomy. A histological examination of the surgical specimen revealed a myxoma. The patient also benefited from a dental prosthesis and functional manducative rehabilitation. Postoperative progress was satisfactory after 6 months. **Discussion:** Giant myxoma of the floor of the mouth is a rare benign tumor whose etiopathogenesis is still controversial. The diagnosis is based on the histological examination of the surgical specimen. Its management requires multidisciplinarity.

Keywords

Myxoma, Floor of Mouth, Jaws, Tumor, Histology

1. Introduction

Myxoma of the floor of the mouth is a soft tissue myxoma, an entity of myxomas of the jaws, classified as benign tumors of the jaws and which is believed to be of mesenchymal origin [1]. Soft tissue myxoma is peripherally located and also called peripheral myxoma. It is opposed to intraosseous myxoma which has a central location in the maxillofacial sphere [2]. This is a rare tumor. It represents 0.41 to 7.19% of maxillary tumors [2] [3], however, the frequency of myxoma of the floor of the mouth is not reported in the literature. The characteristics of soft tissue myxomas are not yet perfectly defined: their epidemiology is not controlled, they are clinically and radiologically difficult to differentiate from other benign maxillary tumors, their diagnosis is suspected by maxillofacial computed tomography and magnetic resonance imaging and confirmed by histopathological examination [2] [4].

We report a case of giant myxoma of the floor of the mouth whose atypical location and size pose a diagnostic and therapeutic problem. The aim of this article is to contribute to the knowledge of myxoma by describing the clinical appearance and the therapeutic approach of a giant myxoma of the floor of the mouth.

2. Observation

A 28-year-old male patient, a carpenter residing in Djorobité, a rural area, was admitted to the oral and maxillofacial surgery department of the Cocody Teaching Hospital in March 2024, for management of a large oral mass. The onset of the disease dates back to 22 years with a swelling of the floor of the mouth which gradually increased in size, motivating the patient to use traditional therapy based on a decoction for 17 years. The evolution was marked by filling of the oral cavity, mobility and tooth loss without stomatorrhagia, dyspnea or deterioration of general condition. The onset of eating and speech difficulties motivates the patient to consult for better care.

The exobuccal examination revealed a deformation of the face due to swelling of the right genital region which extended from the mandibular angle to the symphyseal region, covered by healthy skin and measured 22 cm/15 cm (**Figure 1**).

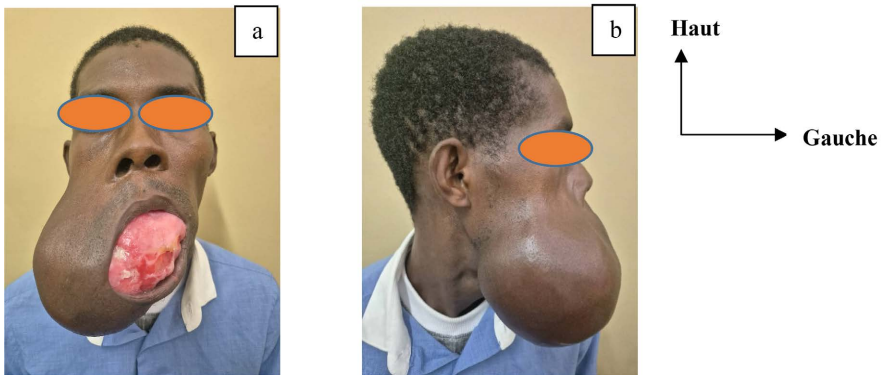

Figure 1. Front and profile view of the tumor.

It was painless, fixed on the firm, homogeneous deep plane. There were no Vincent signs or cervico-facial lymphadenopathy.

The intraoral examination revealed a large exophytic mass filling the right labial-jugal vestibule occupying the entire floor of the mouth and the mandible on the right pushing the tongue backward. There was labial-jugal dilation by the externalized mass preventing labial closure and allowing saliva to drip. The mass was not ulcerated and did not bleed on contact. It was firm and set on a wide base.

The dental assessment revealed mobility and dental movement in Sector 4 and the incisor-canine block in Sector 3. Elsewhere, the examination was unremarkable.

The maxillofacial CT scan revealed a large, well-defined, roughly oval mass with heterogeneous content made up of hypodensity and hyperdensity, extending from the floor of the mouth to the genio-masseterine region repressing the right mandibular corpus (Figure 2 & Figure 3).

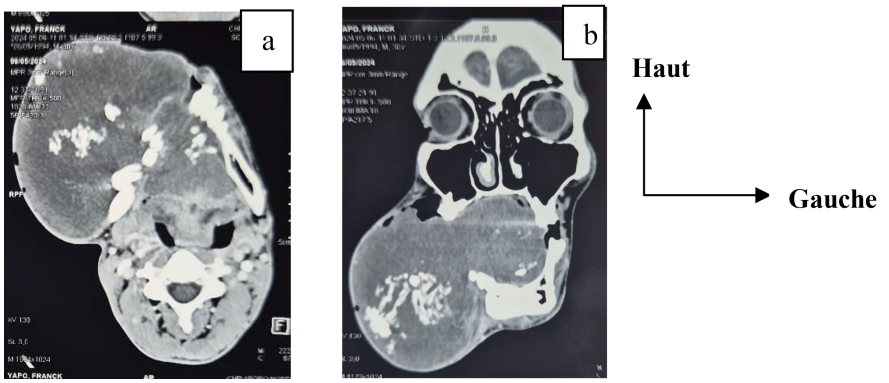

Figure 2. Maxillofacial CT scan in parenchymal window, in axial and coronal sections showing a large tumor at the expense of the floor of the mouth and the right genio-masseterinal region.

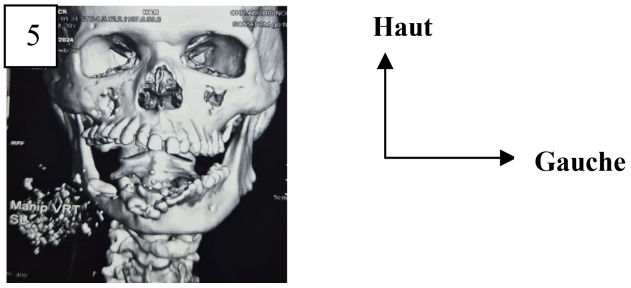

Figure 3. Maxillofacial CT scan with three-dimensional reconstruction showing "honeycomb" images in the right genio-masseterinal region.

In the operating room, we initially carried out intubation by tracheotomy due to the lack of a naso-fibroscope (Figure 4). Tumor excision was carried out via a translabial mucocutaneous route. After incision of the complete oral mucosa, followed by progressive decision of the different tissues. The tumor being large and developed at the expense of the floor of the mouth was exposed and cleaved. The

tumor excision was carried out in one piece without significant loss of mucosal substance, and without sectioning the submandibular canal and the lingual nerve (Figure 4 & Figure 5).

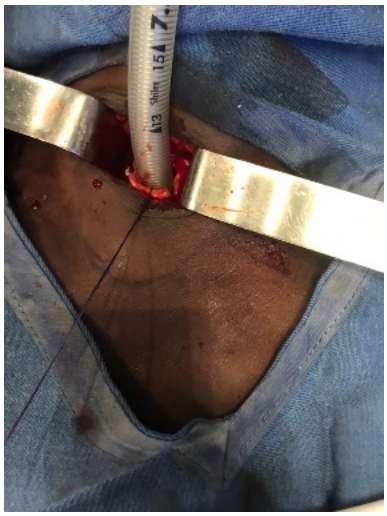

Figure 4. Image of the intraoperative tracheostomy.

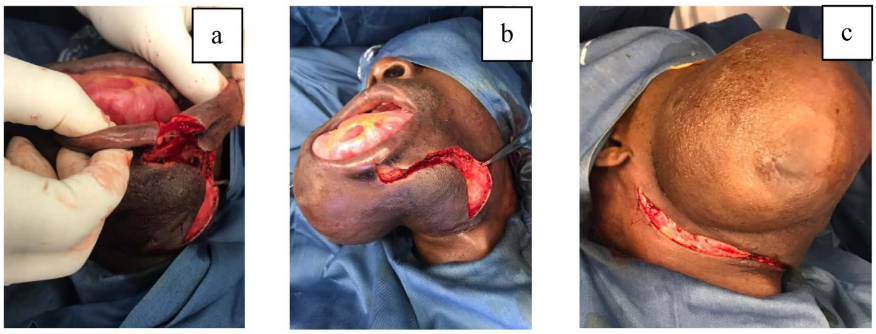

Figure 5. Translabial and cervical skin incision.

The tumor had caused a maxillo-mandibular deformation with enlargement of the maxilla and mandible as well as tooth mobility in sector IV. We carried out a multiple extraction of the mobile teeth (Figure 6 and Figure 7).

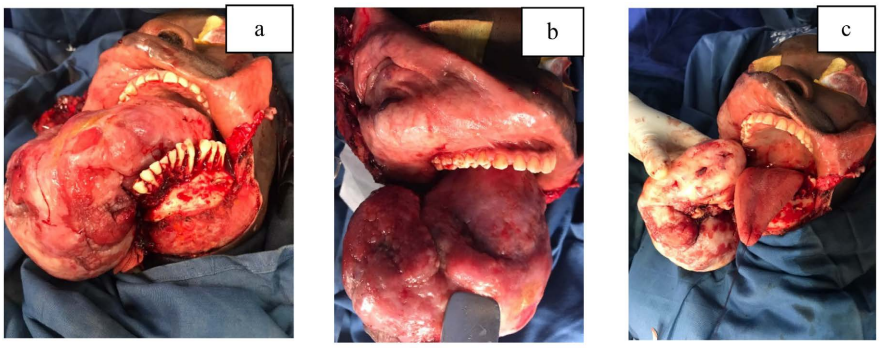

Figure 6. Images tumor exit.

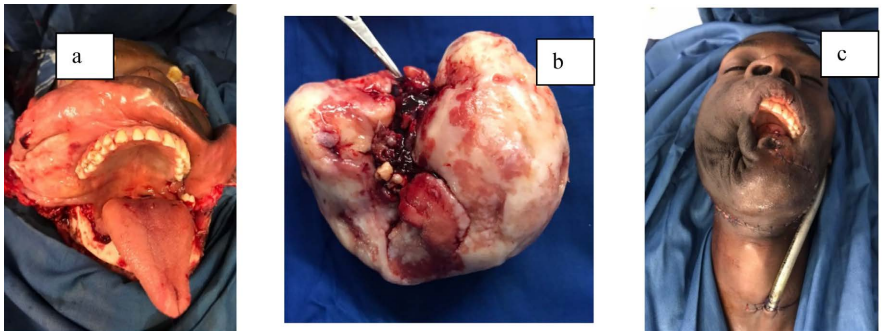

Figure 7. Images of the oral cavity post-tumor excision, of the surgical specimen and after closure of the incisions.

The surgical specimen weighed 2700 g and was sent to pathological anatomy for a histological examination which revealed at the level of the chorion a sparse cellular proliferation consisting of spindle or wavy cells without cytonuclear atypia or mitosis with elements bathed in an abundant myxoid framework (**Figure 8**).

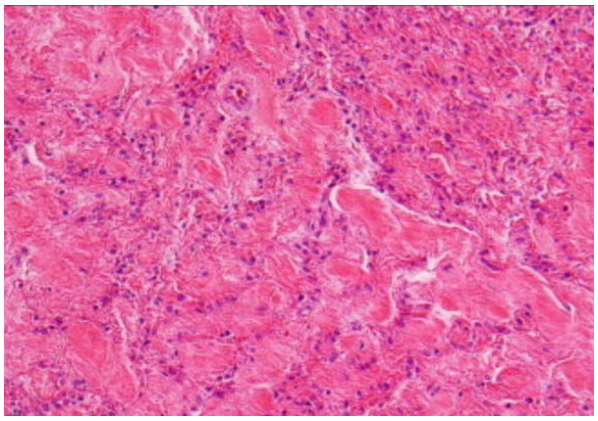

Figure 8. Aspect microscopique du myxoma.

On D60 post-operatively (**Figure 9**), we requested a control maxillofacial CT with 3D bone reconstruction, which demonstrated non-tumor recurrence and progressive retraction of the mucocutaneous tissue in the right genital region (**Figure 10**).

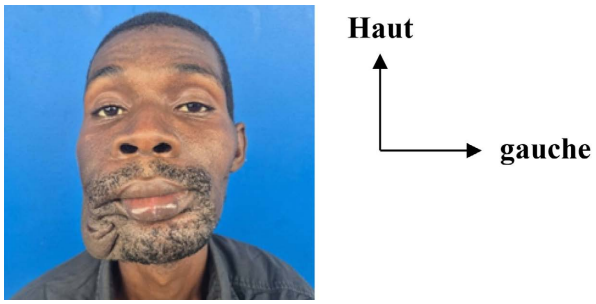

Figure 9. Image of the patient on post-operative day 60.

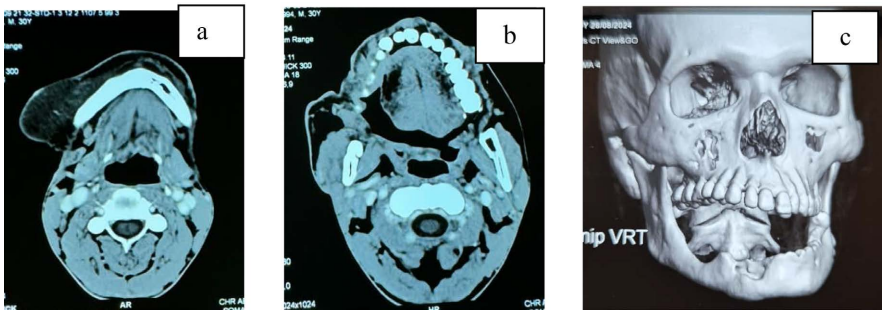

Figure 10. Maxillofacial control CT on post-operative day 60.

The postoperative course was simple at D60 and D90 postoperatively (**Figure 11**). The patient received a dental prosthesis, functional masticatory and speech therapy rehabilitation with a view to restoring masticatory function and speech (**Figure 11(b)**). The prognosis was satisfactory after a follow-up of 06 months. The patient had achieved social reintegration.

The patient benefited from monitoring for up to 6 months without tumor recurrence allowing social reintegration.

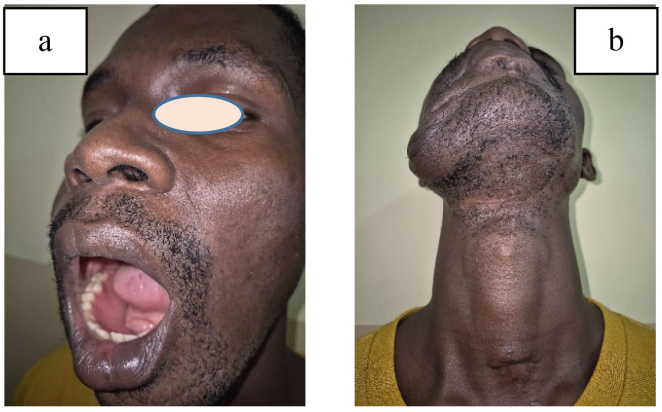

Figure 11. Image of the patient on post-operative day 90 after prosthetic dental restoration and right-sided skin retraction.

At 7 months post-operatively, he presented excess skin in the right genital region. The patient, considering himself satisfied with his surgical intervention, rejected the indication for a facial lift and implant-dental restoration (**Figure 12**).

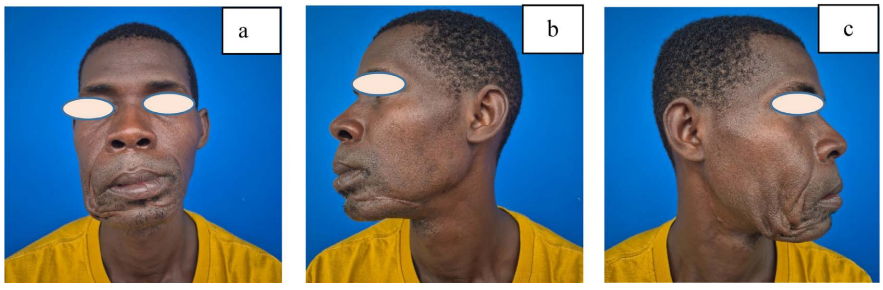

Figure 12. Image of the patient at 7 months post-operatively with good progress.

3. Discussion

Maxillary myxomas are classically divided into two types: central myxomas or odontogenic myxomas located intraosseously and extraosseous myxomas called peripheral myxomas or soft tissue myxomas occurring in the soft tissues covering the dental areas of the mandible and the maxilla [1] [2].

Soft tissue myxoma is a rare condition in the maxillofacial sphere and is less common than intraosseous myxoma. The case we report is a soft tissue myxoma. The frequency of myxoma of the floor of the mouth is unknown. The literature provides only case reports explaining its rarity [4] [5].

The etiopathogenesis of myxoma of the floor of the mouth is similar to that of soft tissue myxomas which remains quite controversial with several theories. For some authors, myxoma develops from stem cells persisting within the connective tissue or results from myxomatous degeneration of the fibrous stroma [6]. For other authors, the occasional presence of odontogenic epithelium within the myxoma from the follicular papilla or the desmodontal ligament would be more in favor of a dental origin [7].

For Zaizi A. *et al.* [8], Soft myxomas can be isolated occurring de novo or can occur in a hereditary context such as in the Carney complex which associates chronic primary hypercortisolism, pigmented lesions of the skin and myxomas, or Mazabraud syndrome which is very rare associating fibrous dysplasia and multiple intramuscular myxomas.

The present clinical case would raise other pathogenetic hypotheses such as the ectopic migration of odontogenic myxoid cells in the floor of the mouth, and a myxoma of the floor of the mouth developed at the expense of the minor salivary glands. These hypotheses are not reported in the literature.

The sex ratio of soft tissue myxoma and floor of mouth myxoma is not known. In the literature review, sex predominance is not reported [3]-[5]. The patient in our study was male. The variability of data on sex reflects the insufficiency of studies and knowledge on soft tissue myxoma in general and myxoma of the floor of the mouth in particular.

Soft tissue myxoma most often affects adolescents and young adults. It very rarely affects people before the age of 10 or after the age of 50. Its incidence would be high between the second and third decades of life [2]-[4]. However, a few rare cases have been described in children [9]. The case that we report is in agreement with the literature, the myxoma began at the age of 7 and evolved for around twenty years. Myxoma of the floor of the mouth is characterized by slow progression. In the advanced stage, the myxoma can become a large tumor invading the surrounding tissues, giving the appearance of a monstrous tumor mass as described in the clinical case that we report. In rich and developed countries the enormous sizes of myxoma have become rare and historic [7].

In the African context, the frequency of large tumors could be explained by ignorance, the negative beliefs of populations, the inaccessibility of specialized health services in countries with limited resources and especially poverty which

lead to a delay in consultation, diagnosis and therapeutic care.

In developed countries where the provision of care is a given, the diagnosis of oral myxoma is often fortuitous during a systematic dental examination which discovers the small tumor, the excision and histological examination of the surgical specimen reveals the myxoma [10].

On the other hand, in countries with limited medical resources, the consultation is motivated by functional and aesthetic complications. The patient in this clinical case consulted at the stage of feeding difficulties caused by the filling of the oral cavity and aesthetic discomfort caused by the monstrosity of the maxillofacial dysmorphia.

Medical imaging helps clarify whether or not the tumor is vascularized and whether or not adjacent bony structures are affected. Classically, the CT image shows a homogeneous, well-defined mass with a density between that of water and muscle. On magnetic resonance imaging, the appearance of soft tissue myxoma is that of a well-defined, homogeneous cyst, hypo-signal on T1 and hyperdense hyper-signal on T2. The image is enhanced after gadolinium injection with peripheral ring enhancement and central enhancement [11].

In this clinical case, imaging was limited to CT to reduce expenses for the already indigent patient. It highlighted the tumor which was well limited and encapsulated within the soft tissues of the floor of the mouth, without osteolysis, which pointed towards the benign aspect of the tumor.

The clinical and radiological aspects are insufficient to make a positive diagnosis. Only histopathological examination allows for a definitive diagnosis. The definitive diagnosis of myxoma is based on the examination of the pathological anatomy of the excision site [10] [11].

These tumors are made up of gelatinous, hypocellular material with a myxoid matrix. Macroscopically, the myxoma has a whitish appearance, soft and gelatinous consistency.

Histological study reveals the presence of spindle-shaped, triangular or stellate cells whose long fibrillar-like extensions tend to crisscross. The cells are embedded in a loose stroma with a mucoid appearance. The vessels are absent.

The pathological anatomy of the patient's surgical specimen having revealed the presence of mesenchymal spindle cells, interposed in a loose myxoid and mucoid stroma, highlights a similarity with the histopathological description in the literature.

The treatment of myxoma of the floor of the mouth or soft tissues is essentially surgical excision of the myxoma [12] [13].

In the clinical case that we report, the therapeutic management included three major challenges which were the difficulty of tracheal intubation, surgical access to the tumor and the restoration of the manducative function.

The enormous volume of the tumor filling the oral cavity made orotracheal and nasotracheal intubations virtually impossible. In addition, the option of fibro-intubation could not be considered due to the lack of a naso-fibroscope in the tech-

nical platform of the hospital center.

These three constraints required the use of intubation via tracheotomy. In developed countries with a naso-fibroscope in the operating room, intubation via tracheotomy has become rare [14]. In our context with a low level of technical support, intubation via tracheotomy is an alternative often practiced [15].

In this clinical case, access to the base of the tumor through an exclusive intraoral approach was impossible. So we performed the double approach, both exo-oral and intra-oral. Exobuccally, a translabial mucocutaneous incision extended to the right subangulo-mandibular position was made. For Banasser A.M. *et al.* [16], this approach allows access and easy excision of large intraoral tumors. Endorally, the mucosal incision made it possible to split the tumor mass from the soft tissues which had facilitated the single-piece excision. This monstrous tumor mass was not part of the mandibular bone, but rather depended on the floor of the mouth.

Therapeutic treatment involved prosthetic dental rehabilitation and functional speech and speech rehabilitation. The patient benefited from an additional dental prosthesis and functional rehabilitation which made it possible to restore masticatory and phonatory functions and to improve the facial aesthetic appearance after a follow-up of 06 months. In countries with limited resources, denture prosthesis is the common and economically accessible dental rehabilitation technique for the patient [12].

A facelift of the excess right-sided skin and implant-dental rehabilitation were possible in order to improve the maxillofacial aesthetics and the masticatory and speech functions of the patient.

The vital prognosis of myxoma of the floor of the mouth is generally favorable after complete excision of the tumor, but the functional and aesthetic prognoses depend on the tumor volume. In the case of this patient, the absence of treatment could be life-threatening due to the occurrence of asphyxia linked to obstruction of the upper airways and the onset of malnutrition due to difficulty in oral feeding. In addition, stigma, social withdrawal and depression are factors that affect the patient's psychosocial climate.

Recurrence of myxoma has been reported in the literature with a rate of around 25% and rare cases of myxoma degeneration have been published. [12] [13]. The risk of recurrence and malignant transformation of the myxoma requires long-term clinical monitoring of our patient.

4. Conclusion

Giant myxoma of the floor of the mouth is rare. The diagnosis is based on the examination of the pathological anatomy of the surgical specimen. The lack of early treatment for myxoma of the floor of the mouth exposes the patient to a vital risk, in the event of survival, to a functional and aesthetic risk with difficulties in social integration. The management of giant myxoma of the floor of the mouth requires multidisciplinary collaboration combining the specialties of maxillofacial

surgery, anesthesia-resuscitation, dental prosthesis, speech therapy and physiotherapy.

Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

References

[1] Lamia, K., Chouaib, R. and Ishane, B.Y. (2010) Soft Tissue Myxoma: About a Clinical Case. *Oral Surgery, Oral Medicine, Oral Pathology, and Oral Radiology*, **16**, 167-169.

[2] Raubenheimer, E.J. and Noffke, C.E. (2012) Peripheral Odontogenic Myxoma: A Review of the Literature and Report of Two Cases. *Journal of Maxillofacial and Oral Surgery*, **11**, 101-104. https://doi.org/10.1007/s12663-011-0194-0

[3] Sayad, Z., Hamidi, O., Benazzou, B. and Boulaadas, M. (2021) Odontogenic Myxoma of the Maxilla: Report of a Case and Review of the Literature. *International Journal of Advanced Research*, **9**, 216-219.

[4] Chrcanovic, B.R. and Gomez, R.S. (2019) Odontogenic Myxoma: An Updated Analysis of 1,692 Cases Reported in the Literature. *Oral Diseases*, **25**, 676-683. https://doi.org/10.1111/odi.12875

[5] Sohrabi, M. and Dastgir, R. (2021) Odontogenic Myxoma of the Anterior Mandible: Case Report of a Rare Entity and Review of the Literature. *Clinical Case Reports*, **9**, e04609. https://doi.org/10.1002/ccr3.4609

[6] Dotta, J.H., Miotto, L.N., Spin-Neto, R. and Ferrisse, T.M. (2020) Odontogenic Myxoma: Systematic Review and Bias Analysis. *European Journal of Clinical Investigation*, **50**, e13214. https://doi.org/10.1111/eci.13214

[7] Nguyen, T.T.H., Eo, M.Y., Cho, Y.J., Myoung, H. and Kim, S.M. (2021) Large Myxomatous Odontogenic Tumor in the Jaw: A Case Series. *Journal of the Korean Association of Oral and Maxillofacial Surgeons*, **47**, 112-119. https://doi.org/10.5125/jkaoms.2021.47.2.112

[8] Zaizi, A., Benomar, H., Badaoui, R., Fekhaoui, M.R., Grimi, T., Mahfoud, M., *et al.* (2020) Intramuscular Myxoma of the Thigh: A Case Report. *Integrative Journal of Medical Sciences*, **7**, Article ID: 147. https://doi.org/10.15342/ijms.7.147

[9] Shupak, R.P. and Cho, J.J. (2020) Mandibular Odontogenic Myxoma in a Paediatric Patient. *BMJ Case Reports*, **13**, e236926. https://doi.org/10.1136/bcr-2020-236926

[10] Titinchi, F., Hassan, B.A., Morkel, J.A. and Nortje, C. (2016) Odontogenic Myxoma: A Clinicopathological Study in a South African Population. *Journal of Oral Pathology & Medicine*, **45**, 599-604. https://doi.org/10.1111/jop.12421

[11] Frison, L., Goudot, P. and Yachouh, J. (2010) Tumeurs myxoïdes des tissus mous de la face. *Revue de Stomatologie et de Chirurgie Maxillo-Faciale*, **111**, 21-24. https://doi.org/10.1016/j.stomax.2009.12.003

[12] Martins, H., Vieira, E., Gondim, A., Osório-Júnior, H., da Silva, J. and da Silveira, É. (2021) Odontogenic Myxoma: Follow-Up of 13 Cases after Conservative Surgical Treatment and Review of the Literature. *Journal of Clinical and Experimental Dentistry*, **13**, e636-e641. https://doi.org/10.4317/jced.58080

[13] Tavakoli, M. and Williamson, R. (2019) Odontogenic Myxomas: What Is the Ideal Treatment? *BMJ Case Reports*, **12**, e228540. https://doi.org/10.1136/bcr-2018-228540

[14] Favier, J., Da Conceicao, M., Levron, A. and Argo, V. (2015) Fibro-Intubation. *Le Praticien en Anesthésie Réanimation*, **19**, 45-48.

https://doi.org/10.1016/j.pratan.2014.12.002

[15] Zegbeh-N'guessan, E.K., Bérété, P.I.J., Ory, D.M.A.O, Djemi, E.M., Ngattia, K.V. and Crezoit, G.E. (2023) Tracheotomy: Indications and Advantages in the Management of Patients Undergoing Maxillofacial Surgery at Bouaké University Hospital. *Journal Tunisien d'ORL et de Chirurgie Cervico-Faciale*, **49**, 21-24.

[16] Banasser, A.M., Bawazir, M.M., Islam, M.N., Bhattacharyya, I., Cohen, D.M. and Fitzpatrick, S.G. (2020) Odontogenic Myxoma: A 23-Year Retrospective Series of 38 Cases. *Head and Neck Pathology*, **14**, 1021-1027. https://doi.org/10.1007/s12105-020-01191-7