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Multidisciplinary approach in the treatment of ossifying fibroma: Case report

Abordagem multidisciplinar no tratamento da fibroma ossificante: Relato de caso

Enfoque multidisciplinar en el tratamiento del fibroma osificante: Reporte de un caso

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Abstract

Ossifying fibroma is a type of fibro-bone lesion characterized by asymptomatic volumetric increase, of slow evolution, which can reach large dimensions resulting in facial asymmetry, causing tooth displacement and functional impairment of the stomatognathic system structures. The purpose of this article was to the clinical report a case of a female patient, seen at the University Clinic, with a complaint of a volumetric increase in the right mandibular region with an evolution of approximately 1 (one) year. Before the total excision of the lesion, an incisional biopsy was performed with the diagnosis of ossifying fibroma. Due to the proportions of the lesion, the patient presented dysphagia, which resulted in an anemic condition, requiring normalization of the condition prior to the total excision of the lesion.

After 6 months of follow-up, the patient showed significant improvement in the shape and function of the operated region, in addition to the nutritional deficiency. The assessment of the patient's nutritional status is extremely important, should not be neglected, since malnutrition is directly linked to the evolution of the disease, and interferes with postoperative recovery.

Keywords: Ossifying fibroma; Facial asymmetry; Mandible; Deficiency diseases.

Resumo

O fibroma ossificante é um tipo de lesão fibro-óssea caracterizada por aumento volumétrico assintomático, de evolução lenta, podendo atingir grandes dimensões resultando em assimetria facial, ocasionando deslocamento dentário e comprometimento funcional das estruturas do sistema estomatognático. O objetivo deste artigo foi relatar o caso clínico de uma paciente do sexo feminino, atendida em Clínica Universitária, com queixa de aumento volumétrico em região mandibular direita com evolução de aproximadamente 1 (um) ano. Antes da exérese total da lesão, foi realizado uma biópsia incisional com diagnóstico de fibroma ossificante. Devido às proporções da lesão, a paciente apresentava disfagia resultando em quadro anêmico, sendo necessário a normalização do quadro antes da exérese total da lesão. Após de 6 meses de acompanhamento a paciente apresentou melhora significativa na forma e função da região operada, além da deficiência nutricional. A avaliação do estado nutricional do paciente é de extrema importância e não deve ser negligenciada, uma vez que a desnutrição está diretamente ligada à evolução da doença e interfere na recuperação pós-operatória.

Palavras-chave: Fibroma ossificante; Assimetria facial; Mandíbula; Deficiências nutricionais.

Resumen

El fibroma osificante es un tipo de lesión fibro-ósea que se caracteriza por un aumento volumétrico asintomático, de lenta evolución, que puede alcanzar grandes dimensiones dando lugar a asimetría facial, provocando desplazamiento dentario y deterioro funcional de las estructuras del sistema estomatognático. El propósito de este artículo fue el reporte clínico de un caso de una paciente, atendida en la Clínica Universitaria, que consulta por un aumento volumétrico en la región mandibular derecha con una evolución de aproximadamente 1 (un) año. Antes de la exéresis total de la lesión se realizó biopsia incisional con diagnóstico de fibroma osificante. Debido a las proporciones de la lesión, el paciente presentó disfagia, que resultó en una condición anémica, requiriendo normalización de la condición previa a la exéresis total de la lesión. Después de 6 meses de seguimiento, el paciente mostró una mejoría significativa en la forma y función de la región operada, además de la enfermedade carenciales. La valoración del estado nutricional del paciente es de suma importancia y no debe descuidarse, ya que la desnutrición está directamente relacionada con la evolución de la enfermedad e interfiere en la recuperación postoperatoria.

Palabras clave: Fibroma osificante; Asimetría facial; Mandíbula; Enfermedades carenciales.

1. Introduction

Ossifying fibroma is defined as growth of non-neoplastic tissue in the oral cavity resulting from an inflammatory process and tissue damage by fibroblasts of the periodontal or periosteum ligament. This tissue injury is probably associated with chronic local irritating factors, such as the presence of dental calculus or foreign bodies in the gingival sulcus (Mergoni, et al., 2015; Neville, et al., 2016). In general it is asymptomatic and manifests its self as an expansive, slow-growing mass. It is more common between the third and fourth decade of life in women and occurs predominantly in the mandible. The expansive growth of the lesion can cause tooth displacement, facial asymmetry and functional impairment (Neville, et al., 2016; Bala, et al., 2017).

In the radiographic examinations presents as a well-defined unilocular lesion with mixed density of radiolucent and radiopaque and with generally sclerotic borders (Sarwar, et al., 2010) The presence of bone tissue in the histopathological exam differentiates ossifying fibroma from other fibrous lesions (Neville, et al., 2016) The differential diagnosis is usually made with fibrous dysplasia, as it also presents radiographically with a mixed structure, however the ossifying fibroma presents a more clearly defined lesion aspect (Abou-Elhamd,

2005; Neville, et al., 2016).

Due to the expansion capacity, the fibroma can cause asymmetries, dental displacements, and dysphagia. Since these injuries often lead to major deformities in the stomatognathic segment and can hinder or even prevent proper feeding (de Amorim, et al., 2015; Neville, et al., 2016; Bala, et al., 2017). Thus, nutritional capacity of the patient may be compromised. Such nutritional problem can directly interfere with the treatment of the patient, since depending on his general condition, he cannot be submitted to a surgical procedure to excise the lesion until compensation is performed (de Amorim, et al., 2015).

The aim of this case was to report on a patient with extensive ossifying fibroma and to highlight the importance of the multidisciplinary approach of the patient who has a nutritional deficiency due to an extensive lesion in the stomatognathic system.

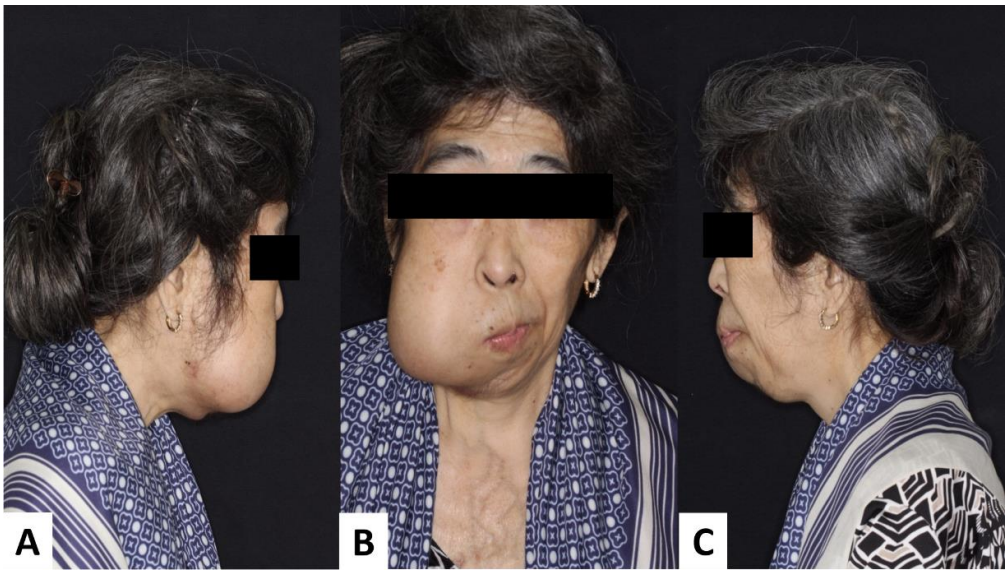
2. Methodology

This study reports a clinical case of ossifying fibroma, characterized by a significant volumetric increase causing facial asymmetry, dental movements and functional impairment. Presenting in a descriptive and qualitative way the surgical and diagnostic approach, emphasize the multidisciplinary importance in hospital environment for a better evolution of cases involving the stomatognathic system.

3. Case Presentation

A 60-years old female patient was attended by the Oral and Maxillofacial Surgery Team at the University. Patient complained of volumetric increase in the right mandibular region, with 1 year of evolution. During examination it was possible to observe the lesion, already in large proportions, was hardened on palpation, and preserved adjacent tissues (Figure 1A, B and C).

Figure 1. Clinical presentation of the patient. A) Lateral vision of the right side. B) Front vision, in which it is possible to observe facial asymmetry. C) Lateral vision of the left side.



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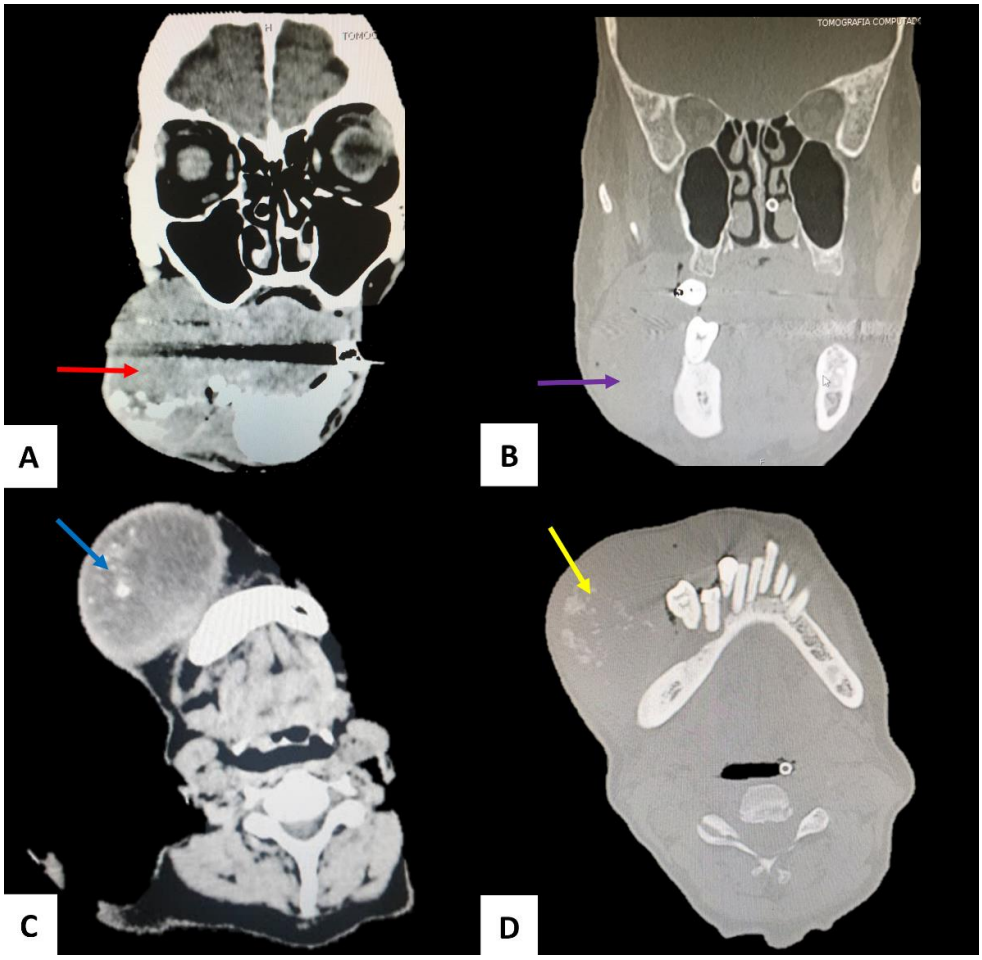
In the intraoral view, the mucous membranes was preserved and the remaining dental elements were displaced and with mobility. The Computed Tomography (CT Scan) showed a hyperdense image, with a rounded shape, defined limits and pedicled implantation (Figure 2A, B, C and D). It was also noted that there was no damage by infiltrating the adjacent mandibular bone structure.

Figure 2. CT scan sections showing a volumetric increase in the jaw (right side). A) Coronal section in soft tissue window (red arrow). B) Coronal section in bone window (purple arrow). C) Axial section in soft tissue window (blue arrow). D) Axial section in bone window (yellow arrow).



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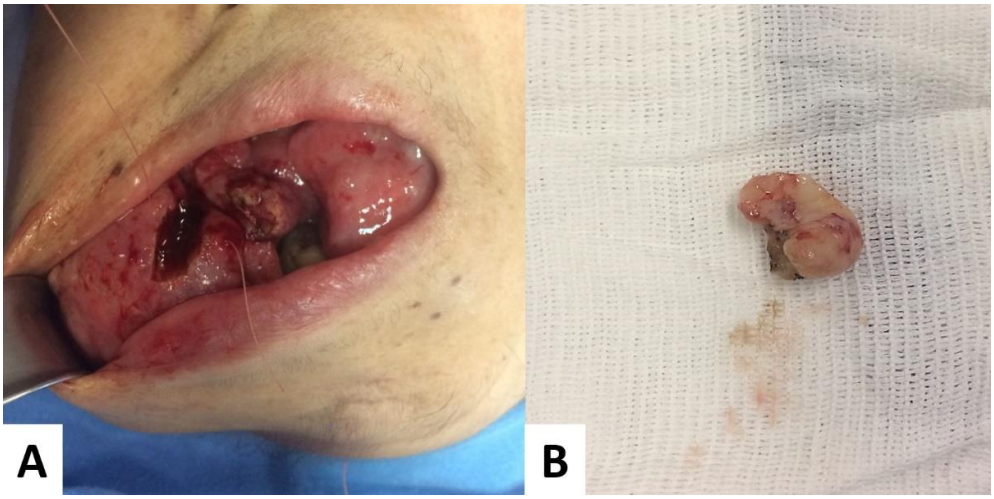
Initially, an incisional biopsy was performed to diagnose the lesion (Figure 3A and B).

Figure 3. First surgical procedure. A) Incisional biopsy. B) Anatomopathological specimen.



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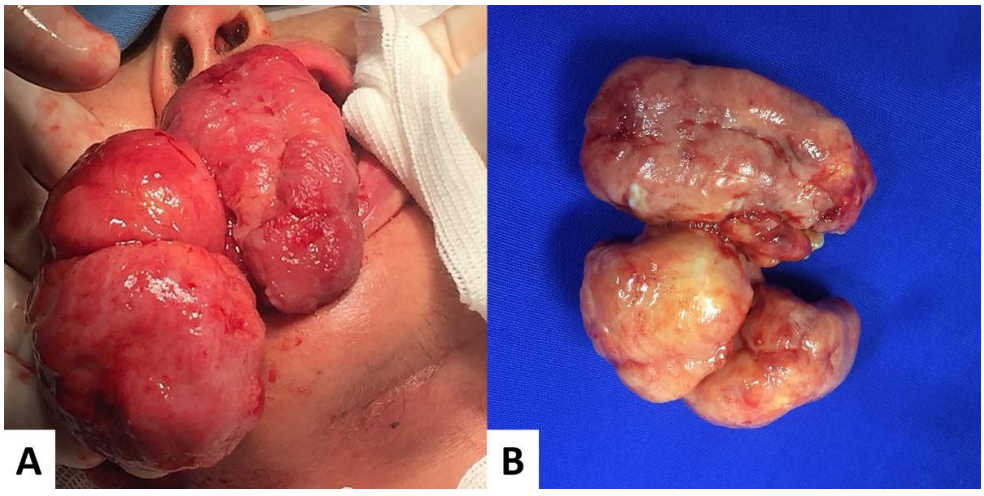
The result obtained was Ossifying Fibroma. Due to dysphagia, the patient had an anemic condition, which needed to be reversed before a new surgical intervention. Thus, a nasoenteral tube was installed to facilitate the diet prescribed by the nutritionist. Subsequently, together with the Head and Neck Surgery team, surgical planning was carried out. The lesion was excised (Figure 4A and B) under general anesthesia and intubation by tracheotomy.

Figure 4. Second surgical procedure. A) Excisional biopsy of the lesion. B) Anatomopathological specimen.



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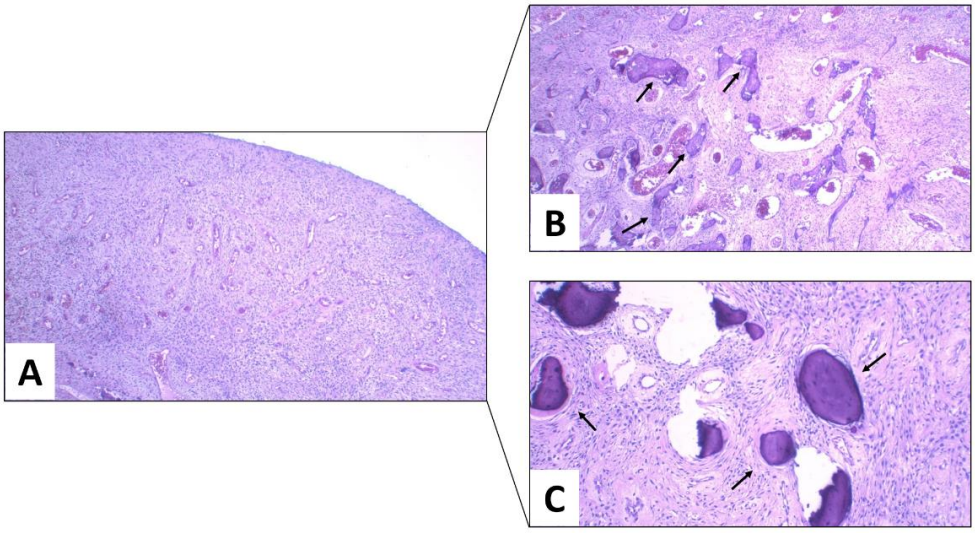
The excised lesion was referred and sent to the laboratory for histopathological analysis, which confirmed the previous diagnosis (Figure 5A, B and C).

Figure 5. Histological sections stained with hematoxylin and eosin (HE). A) Surface of the lesion with mineralization stains – 4x magnification. B) Central portion of the tissue with immature bone trabeculae – 10x magnification. C) Rounded and basophilic structures similar to cementum – 40x magnification.



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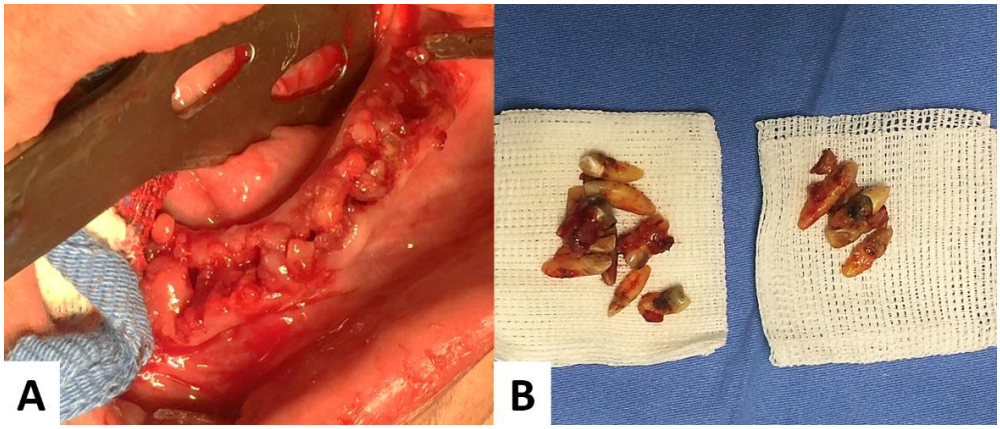
Patient also presents an aggressive periodontitis so the remaining teeth were all extracted during the procedure (Figure 6A and B).

Figure 6. Dental extraction. A) Intraoral vision after dental extraction B) Extracted dental remnants.



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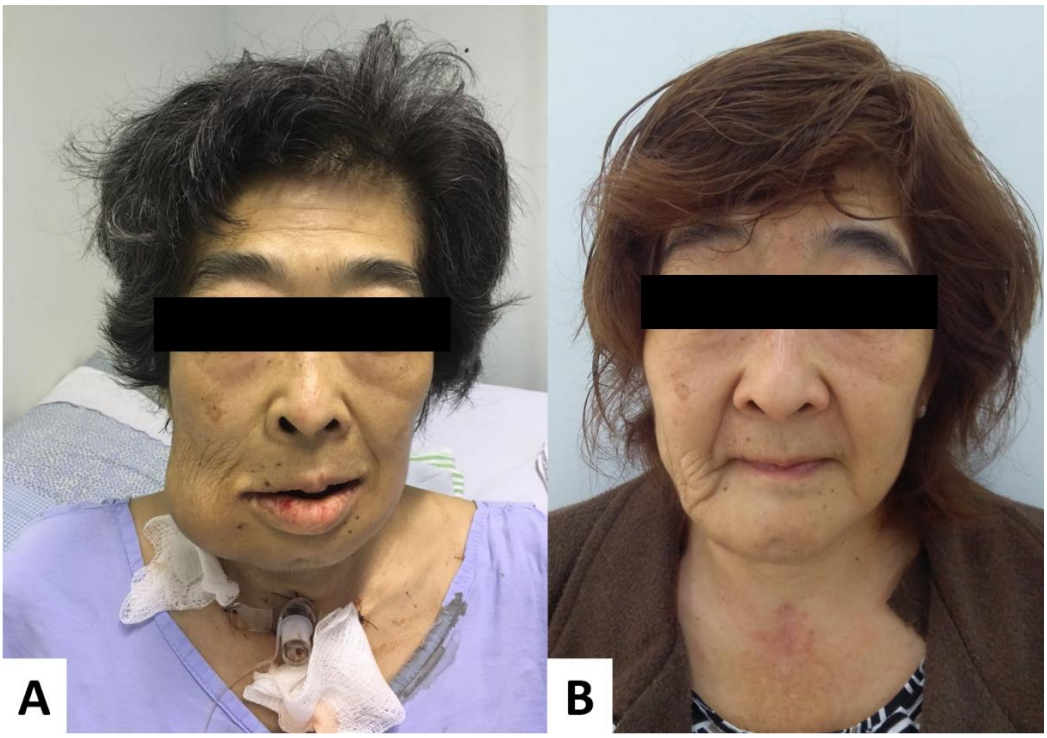
In the immediate postoperative period (Figure 7A), tissue flaccidity was observed in the region where the lesion was located. In the 6 months follow-up (Figure 7B), the patient

showed a significant improvement in the shape and function of the operated region. In addition to an improvement in her self-esteem and in her nutritional deficiency.

Figure 7. Clinical presentation of the patient. A) Immediate follow-up. B) 6 months follow-up.



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4. Discussion

Ossifying fibroma is a type of fibro-osseous lesion, characterized by the proliferation of fibrous tissue containing varying amounts of mineralized tissue, such as bone and / or cementum (da Silveira, et al., 2015; Bala, et al., 2017) It can appear asymptomatic at the beginning and it is more common in women between the third and fourth decade of life (Neville, et al., 2016; Bala, et al., 2017). Clinically, presents as a nodular aspect and sessile or pedicled implantation (Mergoni, et al., 2015). They occur predominantly in the mandible and, due to their slow growth, they can reach large proportions and cause rupture of the bone cortices, promoting facial asymmetry and dental displacement (Zachariades, et al., 1984; Gurol, et al., 2001; Sarwar, et al., 2010). As seen in this present case, this injury affected a female patient, located in the jaw and with considerable dimensions promoting facial asymmetry. It is observed that the main complaint did not involve pain, but discomfort caused by the volumetric increase.

Radiographically, they are well delimited, with defined edges and with radiolucent-radiopaque content, which can vary depending on the amount of mineralized material inside (Sarwar, et al., 2010; Bala, et al., 2017). Differential diagnoses are lesions with a similar radiological appearance, such as calcifying odontogenic cystic tumor, adenomatoid odontogenic tumor, calcifying odontogenic cyst and, mainly, fibrous dysplasia (Abou-Elhamd, 2005; da Silveira, et al., 2015; Neville, et al., 2016). Once this lesion present a well-defined edges the most indicated treatment is enucleation. For more aggressive lesions, where there is loss of facial symmetry or dental problems, reconstructive surgery is used to improve aesthetics and function (da Silveira, et al., 2015). In the present case, although no cortical rupture was observed, the lesion reached proportions that promoted dysphagia and, consequently, anemia in the patient and it was necessary to reverse the nutritional condition before the surgical procedure.

Malnutrition term is generally used in a context in which there is a deficiency in protein and/or energy intake. This is due to a decrease in nutrient intake and is characterized by weight loss and changes in body composition (Kyle, et al., 2005). Disease-related malnutrition is a term used to define a situation of insufficiency in the intake, use or absorption of energy and nutrients related to the cause or the consequence of the disease presented by the patient, as described in the case report, causing a worse outcome of the disease course and treatment (Allison, 2000).

The presence of extensive lesions or neoplasia involving the head and neck region routinely causes signs and symptoms that will impair aesthetics, function, and lead to swallowing difficulties (Kerckhaert, et al., 2005; Ogbureke, et al., 2007), as can be seen in this clinical case. The patient had anemia due to intense dysphagia. The patient's nutritional status has a direct correlation with the patient's response to the disease and the instituted treatment, so nutritional deficiencies must be detected early and through nutritional support they must be corrected in advance (Lama More, 2001)

The case reported shows that an effective treatment was only possible when patient's anemic condition was reverse through the assistance of a multidisciplinary team, highlighting the importance of the nutritional contribution made through the nasoenteral tube. The nasoenteral tube fits into the enteral nutritional support, it is used when oral intake is not possible or is inadequate, it is considered more physiological, promotes the maintenance of the integrity of the intestinal mucous barrier and is able to provide an energy supply that meets the needs of the patient in order to prevent or treat disease-related malnutrition (Debaveye & Van den Berghe, 2006).

5. Final Considerations

Patient's nutritional status should never be neglected since it can directly harm the evolution of the disease. It should also be noted that the presence of a multidisciplinary team assisting hospitals provides better preparation and monitoring of patients during their treatments.

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