

# Advanced Stage Stuck Gland Adenocarcinoma: Case Report

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## Abstract

Parotid gland adenocarcinoma is commonly a tumor of low malignancy and low incidence worldwide. The reported case shows the rapid progression of this tumor in an elderly patient and infrequent effects, such as a presentation of facial edema not commonly described in the medical literature. Patient was admitted to hospital in November 2019 with secretion and partial hearing loss in the right ear and infiltrative and stone lesion with initial skin ulceration in the right cervical region. After 42 days, he returned and was admitted to the intensive care unit with significant swelling of the face, hardened and hyperemic neck, difficulty in speech and inability to open the eye. He presented changes in the mobility of the speech and hearing organs, reduced laryngeal mobility, vocal changes, speech with altered articulation and severe oropharyngeal dysphagia with risk of bronchoaspiration. The patient was diagnosed in September 2019 with a parotid tumor (salivary gland adenocarcinoma T4). The medical team requested computed tomography, computed tomography angiography of the chest and cervical vessels and computed tomography of the neck, in addition to evaluation by the head and neck surgery service and general surgery. After analyzing the results, the medical team

suggested a hypothesis of tumor invasion that could result in obstruction of local lymphatic drainage, something unusual in the evolution of this type of tumor. In addition, it was not possible to adhere to radiotherapy treatment due to the extent of the lesion and there was also no confirmation of metastases. The reported case shows us that parotid gland adenocarcinoma, when diagnosed in an advanced stage, can limit the approach to treatment. It was chosen in agreement with the family to proceed with palliative care without invasive measures. Palliative care may be the best option for cases like this, bringing some comfort to the patient and his family.

## Keywords

Parotid Neoplasms, Cancer of the Parotid, Palliative Care, Critical Care

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## 1. Introduction

The parotid glands are the largest salivary glands in our body. There are two glands located in the neck region, immediately below and in front of each ear [1]. Parotid gland adenocarcinoma is a low-incidence tumor in the world that is proportionally distributed between the sexes (52% in females and 48% in males). Most of those affected are white, with an average age of 57 years [2]. In a study with cases of salivary gland tumor, 65.3% were classified as benign and 34.6% as malignant, with the majority of tumors occurring in the parotid gland (57.2%) [3]. The mortality rate is low, depending on the stage at which the disease is at the time of diagnosis [2]. Metastases are relatively frequent, but metastases in distant regions are rare [4]. The symptoms of malignant tumors are pain, facial paralysis, skin ulceration, involvement of adjacent structures and metastases to lymph nodes and distant regions [5].

The case presented here is a cancer patient with a late diagnosis of the tumor (adenocarcinoma of the parotid gland T4), who presented a series of secondary complications, mainly an important facial edema for which the medical team did not find an explanation in the exams. In this case, the complications of the patient with parotid gland adenocarcinoma, the impossibility of adhering to the suggested radiotherapy treatment and its outcome stand out. Tumors of the parotid gland still need further clarification of the common points of the disease in different patients [2] [4] [6] [7] [8]. In this case, it is perceived the importance of palliative care in a patient that the disease was in an advanced state, especially during the ICU stay, in which doctors together with family members opted for palliative care to minimize the patient's suffering. The patient was recruited and accepted to participate in research carried out in the ICU with CAEE number: 91988318.6.0000.5336—Brazil. The case is reported here for sharing with colleagues.

## 2. Case Report

Male patient, 74 years old, white, single and retired. He arrived at the hospital on

11/27/2019 with a history of diagnosis of parotid tumor (salivary gland adenocarcinoma T4) confirmed in September 2019, and loss of 7 kg since then. He had comorbidities such as systemic arterial hypertension, type 2 diabetes mellitus, mood disorder, chronic constipation, was an ex-smoker and ex-alcoholic. On physical examination, he had 76 kg and 1.90 m, with the presence of secretion and partial hearing loss in the right ear. The patient was in good general condition, lucid and oriented and without complaints of pain. The medical team found an infiltrative and stone lesion with initial skin ulceration in the right cervical region that appeared to have an epicenter in the salivary gland. Patient has no signs of facial paralysis and lymph node enlargement on palpation.

The previous medical history showed that the patient had a hemorrhagic stroke (stroke) in 2006 and an ischemic stroke in 2014, when he presented neurological sequelae (hemiparesis) and, since then, he was bedridden. The patient had been institutionalized in a nursing home since 2015, and during this period he had a transient ischemic attack. In addition, he underwent surgery for a hip fracture in December 2017 and prostatectomy surgery.

The patient had a family history of lung and pancreatic cancer in his siblings and breast cancer in his mother. He had good family support with his brothers always present. Patient used medication at home, such as: lexapro, domperidone, enalapril, hydantal, allopurinol, acetylsalicylic acid, risperidone, oxcarbazepine, glyphage, atorvastatin, muvinlax, calcimec vitadesan and amlodipine. The patient was discharged on 11/28/2019 after undergoing magnetic resonance imaging and computed tomography to assess the disease and to be instructed on the side effects of the condition.

On 08/01/2020, the patient returned to the emergency room with facial edema in the eyes, mouth and ears (**Figure 1**) associated with noisy breathing, which started a week ago and worsened in the last 12 hours.

Computed angiotomography was requested to assess edema of unknown origin in the head region (**Figure 2**).



**Figure 1.** Facial edema in the eyes, mouth and ears. Source: Author data.



**Figure 2.** Computed angiotomography of carotid and vertebral arteries. Source: Author data.

The tomography report showed a patent aortic arch, brachiocephalic trunk and left subclavian artery, with mixed plaques and slight luminal reduction. Peruvian right subclavian artery with calcified plaques at its origin and slight luminal reduction. Pervious vertebral arteries with calcified plaques and significant luminal reduction at the origin and slight in the V4 segment below. The patient was also evaluated by the head and neck surgery and general surgery service, but had no indication for future surgery.

On 01/09/2020, the patient was referred, lucidly, from the emergency room to ICU admission. The diagnostic hypotheses raised as possible causes of edema involved an allergic process or vascular compression due to tumor progression. The medical team requested CT angiography of the chest and cervical vessels and CT scan of the neck. After the result, the ICU medical team suggested a hypothesis of tumor invasion that could result in obstruction of local lymphatic drainage. It was observed with the radiotherapist that radiotherapy treatment would be difficult and toxic due to the extent of the lesion. It was chosen in agreement with the family to proceed with palliative care without invasive measures.

On 01/10/2020, it was observed that the patient had severe edema of the face and neck, hardened and hyperemic, difficulty in speech and impossibility of opening the eye due to the edema. It was observed changes in the mobility of the speech and hearing organs, reduced laryngeal mobility, vocal changes, weak and tense voice, speech with altered articulation, severe oropharyngeal dysphagia and risk of bronchoaspiration, including saliva.

On 01/11/2020, the patient reported dyspnea and presented psychomotor agitation during the night, being evaluated by a psychiatrist and medicated with haldol and fenergan. On 12/01/2020, the patient continued with dyspnea and presented polyuria. On this day, a nasoenteral tube was attempted for diet administration, without success (cough, secretion and desaturation may have made the procedure difficult). On 01/13/2020, the patient died due to disease progression.

### 3. Discussion

An important point in the discussion of this case is that the presence of facial edema is possibly related to the progression of adenocarcinoma of the right parotid gland, a fact little mentioned in patients with this type of cancer. Based on the medical literature, a report describes the case of a 42-year-old patient diagnosed with a parotid gland tumor with right facial edema that progressed in 5 months, making it impossible to completely close his eyes or even smile [9]; however, when analyzing the images, in the present report the patient presented facial edema with greater proportions, in addition to an infiltrative lesion with stones and skin ulceration in the cervical region. These signs differentiate the present case from what has been reported in the literature. As a limitation for this case, it is possible to observe the probable advance of the state of the adenocarcinoma of the right parotid gland T4, hindering possible treatments and preventing approaches related to diagnostic hypotheses, which can be confirmed by the brief hospitalization of the patient in the ICU and by its outcome. It was also not possible to confirm the hypotheses of the appearance of this important edema due to the difficulty in accessing the face and neck, which were hardened and hyperemic. For these reasons, the medical team, together with family members, decided on palliative care, limiting a broader approach to the case.

Parotid gland adenocarcinoma is a low-incidence tumor worldwide [10] and has a similar distribution between men and women. A study [2] with 4431 patients pointed out that the average age of diagnosis of the disease is 57 years old and that, although there are not many differences between genders in the appearance of the tumor, women have a longer survival time compared to men. There are several factors associated with decreased survival, such as age, comorbidities, advanced pathological stage and environmental factors. Tumors in stages greater than or equal to T2 negatively impact patient survival [2]. In the present report, the patient presented some negative factors related to decreased survival, such as advanced age, diagnosis of the tumor at an advanced stage and unhealthy lifestyle habits characterized by heavy smoking and alcoholism in the past.

In most cases of adenocarcinoma, the facial nerve is not involved [6]. However, in the present report, the patient had the tumor in an advanced stage and, probably, the tumor had compromised structures close to the parotid gland—such as the facial nerve. In this sense, in order to avoid a possible facial nerve injury during a future surgery that could cause facial paralysis, the medical team and family members opted for palliative care. Several case reports associate parotid adenocarcinoma with metastases. The medical literature presents the case of a 53-year-old man with a medical history of parotid gland adenocarcinoma, treated with chemotherapy and radiation who came to present a metastatic adenocarcinoma lesion on the left side of the L4 vertebral body [4]. Likewise, another report cites the case of an 81-year-old woman with parotid gland cancer who underwent a total parotidectomy with facial nerve sacrifice and neck dissection, which, after surgery, was diagnosed with widespread metastases in the

spinal cord bone [7]. Another study reports the story of a 70-year-old woman who underwent a total excision of the left parotid gland, cervical lymph node dissection and postoperative radiotherapy who, even so, died due to distant metastases 13 months after surgery [8]. Thus, it is evident that metastases from the parotid gland tumor are relatively frequent and that considerably worsen the patient's survival. In this sense, it is noteworthy that in the present report there were no findings of metastases, however, as the adenocarcinoma was in an advanced stage and because it is a patient with a family history of cancer, with unhealthy lifestyle habits (ex-alcoholic and ex heavy smoker), the possibility of metastases cannot be ruled out, which could have been investigated if the patient had a longer survival time.

In this case, the scenario differs from most reports of parotid gland adenocarcinoma found in the literature due to the late diagnosis of the tumor, limiting the treatment approach with surgery, chemotherapy and/or radiotherapy. It is observed that this case has differences in relation to what is found in the medical literature on the subject, such as the late diagnosis of the tumor, the possible correlation of a large edema to the main tumor, the impossibility of adhering to radiotherapy treatment suggested and the non-observation of metastases—even though its diagnosis is likely, if the patient's survival time was longer. This report brings possible correlations of cases of parotid tumor in other patients, contributing to the medical literature.

#### **4. Conclusion**

The patient had a late diagnosis of the tumor, evolving to death four months after confirmation of the diagnosis. This may be related to edema, possibly associated with tumor invasion that obstructed local lymphatic drainage. Something little seen in the evolution of this case was the presence of an infiltrative lesion and stones with cutaneous ulceration in the cervical region. According to the medical literature, a report of adenocarcinoma of the parotid gland was found with the presence of facial edema and without signs of hardening of the cervical region and infiltrative lesion and stone with skin ulceration. In the present case, due to the extent of the lesion, radiotherapy was contraindicated and there was also no confirmation of the presence of metastases. Palliative care may be the best option for cases like this, bringing some comfort to the patient and his family.

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#### **Conflicts of Interest**

Authors declare not having any conflict of interest regarding this article.

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