


Case report: tongue squamous cell carcinoma after renal transplantation

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Abstract:

The continuous immunosuppression of patients undergoing solid organ transplantation leaves them susceptible to the development of a wide variety of neoplasias, increasing their risk in relation to the general population. The present article presents a case report of squamous cell carcinoma in the tongue of a 57 year-old man fifteen years after a live donor kidney transplant. In use of several medications, he presented several comorbidities in the post-transplant period. One of these, Kaposi's sarcoma, is quite common in organ transplanted individuals associated with HHV-8. In this specific case, the neoplasia had the oral cavity as the primary site and the Oral Medicine team had an important role in the diagnosis of the lesion and treatment of its comorbidities, and this care was the motivation of this article.

Keywords: Carcinoma, Squamous Cell; Tongue; Immunosuppression (Physiology); Kidney Transplantation; Oncogenic Viruses; Oral Medicine

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INTRODUCTION

Organ transplants have been the ideal alternative for patients with organ failure. Brazil is the second in absolute number of kidney transplants in the world. For transplantation to occur, careful evaluations are performed to ensure the success of the procedure¹. Continuous immunosuppression of patients undergoing solid organ transplantation leaves them susceptible to the development of a wide variety of neoplasms, increasing their risk^{2,3}. An altered or deficient immune system caused by chronic immunosuppression is considered to be one of the most important factors for carcinogenesis. Post-transplantation malignancies may occur by three mechanisms: for the first time, through the donor organ or through the recurrence of a recipient malignancy prior to transplantation³.

Once cancer is discovered, transplanted individuals have worse responses to treatment than patients in the general population⁴. This can occur for several reasons, the main ones being the immune system deficient and the fact that transplanted individuals may not receive such aggressive treatments because of the risk of provoking graft rejection or failure⁴.

Due to the increased risk of developing malignancies in this population, strict follow-up is essential because early detection directly influences the prognosis of the disease.

CASE REPORT

A white male, 57 years-old, non-alcoholic or smoker, HIV negative, with chronic renal failure and on hemodialysis for 2 years and 3 months, underwent renal transplantation in March 2002, being HLA I from a living donor. In the first year after transplantation, he observed the appearance of violaceous spots in the upper left limb. Two years after transplantation, the spots also appeared on the lower left limb.

In follow-up with the Dermatology sector at the Federal University of São Paulo, he was diagnosed in 2005 with Kaposi's Sarcoma. Treatment of the disease involved chemotherapy in cycles alternating with doxorubicin, liposomal doxorubicin, taxol and vinorelbine, oral mucositis occurring on several occasions, requiring dose reduction of the chemotherapeutic. The disease remained stable, without progression of lesions, until 2014, avoiding the indication of radiotherapy. With the progression of the disease, radiotherapy begins in 2015. In the left leg receives 50 Gy and in the left and right thighs, 30 Gy each.

Other comorbidities such as pituitary adenoma, prolactinoma, hypothyroidism, diabetes mellitus, dyslipidemia, erysipelas, and varicella occurred over the years.

In February 2017 during follow-up consultation in the Oncology sector, the patient complained of a wound in the tongue. The medical team noticed a lesion of hyperplastic and atopic aspect, sending it to the Dentistry Service, for fine needle aspiration puncture, due to suspicion of a lesion related to Kaposi's sarcoma.

The intra-oral clinical examination revealed a good condition of oral hygiene and use of total superior prosthesis. On the occasion, the patient reported been using Sirolimus 2mg a day, prednisone 5mg daily, levothyroxine 50mcg daily, bezafibrate 200mg daily, atorvastatin 20mg daily, metformin 500mg 3 times a day, gliclazide 30mg twice daily, bactrim 1 tablet daily and deposit 1 ampoule every 21 days.

Oroscopy showed a nodular lesion on the right border of the tongue, with ulcerated surface, necrotic center, hardened edges, well defined limits, measuring approximately 20 mm in diameter causing spontaneous painful symptomatology (Figure 1). No palpable lymph nodes were found in the cervical region. The patient associated the appearance of the lesion with repetitive traumas by the superior prosthesis. An incisional biopsy of the lesion was performed and after histopathological analysis, the diagnosis of invasive squamous cell carcinoma was established, moderately differentiated. Thirty days after the biopsy, the lesion was larger than the initial lesion.

The patient was then referred for treatment to the Head and Neck Surgery team. The clinical staging of the lesion revealed a tumor cT3M0N0. The treatment



Figure 1. Aspect of the lesion at the first appointment.

proposed by the medical team was a glossectomy followed by cervical emptying. Surgery performed was hemiglossectomy and cervical emptying from I to III (Figure 2). After surgery, the established staging was pT2M0N0, with invasive squamous cell carcinoma, moderately differentiated, ulcerated, infiltrating into muscle tissue, with perineural and angiolymphatic invasion measuring 2.1 cm x 2.0 cm and 1.1 cm depth. Adjuvant radiotherapy was indicated because of perineural and angiolymphatic invasion.



Figura 2. Tongue after partial glossectomy.

The patient was then referred to the Dentistry team for oral cavity pre-radiotherapy, where non-restorable teeth were extracted, teeth were restored and plaque control and hygiene orientation were performed. Subsequently the radiotherapy with total dose was 60 Gy, fractionated in 30 sessions.

At the end of the 30 sessions, the patient presented radioinduced mucositis in grade III (WHO classification) and was hospitalized in the institution where he is following the renal graft. The dentistry team intervened again during hospitalization and, for the treatment of mucositis, low-power laser applications were performed in daily doses, improving the patient's signs and symptoms. After discharge from the hospital, the patient is in good general condition, with good healing of the surgical wound and keeps followed up by a dental team. Despite all these comorbidities, the renal graft remains functional and has no evidence of rejection.

DISCUSSION

Immunosuppression after organ transplantation is associated with an increased risk of malignancies, mainly related to oncogenic virus³.

Kaposi's sarcoma is a neoplasm of malignant vascular tissue, usually associated with HIV and HHV-8. It presents a higher incidence of complications such as non-Hodgkin's lymphoma, leukemia and epithelial neoplasia of the lip, tongue, mouth and salivary glands in the post-transplant period in relation to the pre and trans-renal substitution periods⁵.

Squamous cell carcinoma is the most frequent type of epithelial neoplasia and factors such as smoking, alcoholism, direct exposure to sunlight and immunosuppression are potentially risk factors. The first case of squamous cell carcinoma in a renal transplant patient was reported in 1978 and after seven months, the patient died of metastasis from this tumor. However, renal function remained unchanged, with no signs of rejection, re-establishment of glomerulonephritis or any other renal disease⁶. This fact resembles the present report, which demonstrates the emergence of comorbidity resulting from drug therapy.

The primary site of squamous cell carcinoma in immunosuppressed patients sometimes occurs in tongue⁷⁻⁹. The onset may occur after a long time after kidney transplantation. According to Prakash et al.⁷, a squamous cell carcinoma with tongue-lined primary site of a man undergoing live donor kidney transplantation, appeared eleven years after transplantation. In the same way, Malleshappa et al.⁸ reported a case of squamous cell carcinoma in the tongue in a 30-year-old male, nine years after kidney transplantation. In the case report described in this study, squamous cell carcinoma appeared after 15 years after the renal graft.

Meng et al. carried out a study with three renal transplant patients who developed squamous cell carcinoma on the lateral side of the tongue in order to identify the best treatment for these patients. During the study, one patient died due to tumor metastases and the other two were treated with surgery, chemo and radiotherapy and achieved healing with no evidence of recurrence or metastasis.

Thus, the authors concluded that the screening of these patients should be done regularly due to the risk of developing post-transplant neoplasia, that surgery, followed or preceded by chemo and radiotherapy is the best treatment for these patients, despite their condition of immunosuppression⁹.

In view of the literature evidence, we affirm that the monitoring of this population after organ transplantation is necessary and that, with the lips and oral cavity being an important site of manifestation of these neoplasia, oral cavity's monitoring must be constant and careful^{4,10}.

REFERENCES

1. Dimensionamento dos Transplantes no Brasil e em cada estado (2009-2016). Registro Brasileiro de Transplantes. 2016;XXII.
2. Mazzucotelli V, Piselli P, Verdirosi D, Cimaglia C, Cancarini G, Serraino D, et al. De novo cancer in patients on dialysis and after renal transplantation: north-western Italy, 1997-2012. *J Nephrol.* 2017;30:851-7.
3. Katabathina VS, Menias CO, Tammisetti VS, Lubner MG, Kielar A, Shaaban A, et al. Malignancy after Solid Organ Transplantation: Comprehensive Imaging Review. *Radiographics.* 2016;36:1390-407.
4. Acuna AS, Fernandes KA, Daly C, Hicks LK, Sutradhar R, Kim SJ, et al. Cancer Mortality Among Recipients of Solid-Organ Transplantation in Ontario, Canada. *JAMA Oncol.* 2016;2:463-9.
5. Vajdic CM, McDonald SP, McCredie MR, van Leeuwen MT, Stewart JH, Law M, et al. Cancer incidence before and after kidney transplantation. *JAMA.* 2006;296:2823-31.
6. Lee YW, Gisser SD. Squamous cell carcinoma of the tongue in a nine-year renal transplant survivor: a case report with a discussion of the risk of development of epithelial carcinomas in renal transplant survivors. *Cancer.* 1978;41:1-6.
7. Prakash J, Prabhakar, Kumar M, Aralapuram K. Carcinoma of the tongue in a renal transplant recipient: a rare post-transplant malignancy. *Saudi J Kidney Dis Transpl.* 2015;26:103-6.
8. Malleshappa P, Aghariya M, Tampi C, Shah BV. Squamous cell carcinoma of tongue in a renal transplant recipient. *Indian J Med Paediatr Oncol.* 2009;30:136-7.
9. Meng S, Jiamei L. Management of tongue cancer in the patient who is systemically immunosuppressed: a preliminary report. *Oral Surg Oral Med Oral Pathol Oral Radiol Endod.* 2000;90:689-93.
10. Öhman J, Rexus H, Mjörnstedt L, Gonzalez H, Holmberg E, Dellgren G, et al. Oral and lip cancer in solid organ transplant patients--a cohort study from a Swedish Transplant Centre. *Oral Oncol.* 2015;51:146-50.