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#### **Case Report**

# Breast Carcinoma Metastatic to Nasopharynx. A Case Report

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#### Abstract

**Introduction:** Metastatic breast carcinoma has been described at different sites in the head and neck region. This is the third case of metastatic breast carcinoma to the nasopharynx.

**Case presentation:** We report a case of a Moroccan 65 year old male patient with invasive breast adenocarcinoma metastasizing to the nasopharynx.

**Conclusion:** A metastasis, although rare, should be included in the differential diagnosis of nasopharyngeal lesion since it may clinically mimic a benign neoplasm or primary carcinoma. Treatment is similar that the other localizations.

### **INTRODUCTION**

Metastatic tumors to the nasopharynx are rare. Many cases of tumors from pulmonary and renal primaries have been reported in the literature. In this present case, an invasive breast adenocarcinoma metastasizing to the nasopharynx was reported. The investigations, subsequent diagnosis and management of this rare case are to be discussed.

# **CASE REPORT**

A Moroccan 65 year old man, north African, presented in 2003, with palpable mass in his right breast. A right modified radical mastectomy and an axillary node dissection were performed. The tumor was 3 cm in its largest diameter. The pathological diagnosis was invasive adenocarcinoma with 3 of 16 axillary nodes involved (pT2pN1). Immunohistochemical stains at that time indicated that tumor cells were negative for estrogen (ER) and progesterone (PR) receptors. Postoperatively, the patient received six courses of chemotherapy based on FEC protocol. At the completion of chemotherapy, he underwent radiotherapy. In 2006, he developed bilateral blindness after severe headache. Head and neck examination revealed a vegetant mass in the nasopharynx, it was confirmed by MRI (Figure 1).

Histopathology and immunohistochemistry of the punch biopsy confirmed an adenocarcinoma of nasopharynx which probably had metastasized from the breast; the tumor cells were positive for PR and negative for ER (Figure 2).

The patient was treated by 3 cycles of palliative chemotherapy based on Docetaxel/Vinorelbine, 3 cycles of Paclitaxel weekly. The evaluation showed a progression disease and the appearance

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of pulmonary and bone metastases. The treatment was changed by protocol Gemcitabine/Oxaliplatine, he received 7 cycles and 8 cycles of Gemcitabine alone because of peripheral neuropathy grade 3.The evaluation showed a stable disease.

Currently, we stopped chemotherapy because of thrombopenia and degradation of performance status. The patient was dead 8 months after receiving best supportive care.

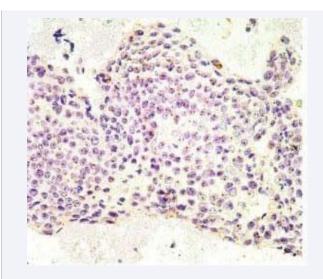
## **DISCUSSION**

Breast carcinoma spreads by both hematogenous and lymphatic channels. The most common metastatic sites are the lungs, bone, and liver, whereas nasopharyngeal



Figure 1 Magnetic resonance imaging showing a vegetant mass in the nasopharynx.

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**Figure 2** Histopathology and immunohistochemistry of the punch biopsy confirming an adenocarcinoma of nasopharynx which probably had metastasized from the breast; the tumor cells were positive for PR and negative for ER.

involvement by metastatic breast disease is rare [1,2]. Metastatic breast carcinoma in head and neck has been reported at different sites including larynx, nose, sinonasal tract and temporal bone. As we know, breast cancer is intrinsically a systemic disease, so it can metastasize to the lymph nodes and distant organs. Nasopharynx can be one of these organs [3]. Expression of ER and/or PR in a proportion of both benign and malignant salivary tumors has been suggested, but some studies have failed to detect any ER or PR positivity. However strong expression of ER or PR receptors favors a diagnosis of the carcinoma of mammary origin. In our case, a previous history of breast carcinoma, morphologic resemblance to the primary breast tumor, positive immunoreactivity of PR strongly support the diagnosis of carcinoma metastasizing from the breast, rather than the diagnosis of a salivary gland tumor [4,5]. Bronchogenic carcinoma of the lung, renal cell carcinoma [6] malign melanoma and breast carcinoma metastatic to the nasopharynx have been reported in the literature, Saab et al. reported the first case of metastatic adenocarcinoma of the breast to the nasopharynx and Baspinar et al reported the second. To our knowledge, our case is the third documented case of metastatic breast carcinoma to the nasopharynx.

We should not forget that although breast cancer is mostly epithelial derived and therefore is similar to primary NPC, it and other metastases to the H&N may require specific treatments, and for this reason multidisciplinary team involvement is advised early on [7].

# **CONCLUSION**

Metastases to nasopharynx from a distant primary are rare. The use of appropriate immunohistochemical markers may be helpful in arriving at the correct diagnosis.

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