

Breast Cancer Metastasis to Nasal Septum

¹ Mehmet KAPAN^a, ² Erdoğan ÖZGÜR^b, ³ Melek ÜNÇEL^c, ⁴ Sait KİTAPLI^d, ⁵ Özgür TANRIVERDİ^d,
⁶ Ali ALKAN^d

^aDepartment of Internal Medicine, Muğla Sıtkı Koçman University Faculty of Medicine, Muğla, Türkiye

^bDepartment of Otorhinolaryngology, Muğla Sıtkı Koçman University Faculty of Medicine, Muğla, Türkiye

^cDepartment of Pathology, Muğla Sıtkı Koçman University Faculty of Medicine, Muğla, Türkiye

^dDepartment of Internal Medicine, Division of Medical Oncology, Muğla Sıtkı Koçman University Faculty of Medicine, Muğla, Türkiye

ABSTRACT Approximately 4% of the patients present with distant metastasis in breast cancer at the time of presentation, with many more developing the distant disease subsequently. A rare site for metastases is the head and neck. Herein, we present a case of nasal septum metastasis from breast cancer. A female patient presented with a mass in the right breast with the diagnosis of breast cancer. She presented with bilateral pulmonary and bony lesions, after 2 years of follow-up. Vinorelbine therapy was continued, and the patient presented with refractory epistaxis. On physical examination, a reddish and fragile mass in the left nasal cavity was detected. Bleeding was controlled using compressive measures. The excisional biopsy revealed invasive ductal carcinoma metastasis. Breast cancer metastasis to the nasal cavity is extremely rare. Clinicians should consider metastasis in cases of treatment-resistant epistaxis, nasal obstruction, and visual impairment.

Keywords: Breast neoplasms; neoplasm metastasis; nasal septum

The most common malignancy and leading cause of cancer-related deaths in women is breast cancer (BC). Despite significant progress in the management of BC, advanced disease remains an important cause of mortality.¹ Distant metastases are present in 4% of the patients at the time of presentation, with many more subsequently developing distant disease.² The most common metastatic sites in advanced BC are bone, lungs, pleura, liver, and brain. Head and neck (H&N) is a rare site for metastases. In most cases, bony involvement of jaws and supraclavicular lymphadenopathy is observed.³ The metastatic spread to the nasal cavity has been rarely reported, with most cases of renal cell carcinoma.⁴⁻⁶ BC metastases to the nasal cavity are extremely rare.⁷⁻⁹ Herein, we present a case of nasal septum metastasis from BC.

CASE REPORT

A 54-year-old female patient presented with a lump in the right breast. She was diagnosed with BC, and a right radical mastectomy and axillary lymph node dissection was performed. The pathology revealed a triple negative invasive ductal carcinoma, T3N0M0. She subsequently received four cycles of adjuvant doxorubicin-cyclophosphamide and 12 cycles of weekly paclitaxel. However, she presented with bilateral pulmonary and bony lesions after 2 years of follow-up. Additionally, she had locoregional recurrence with an ulcerated mass on the surgical site. She had palliative 66 Gy radiotherapy to the anterior wall of the right thorax. She was further treated with palliative 6 cycles of docetaxel, 9 cycles of docetaxel-

TO CITE THIS ARTICLE:

Kapan M, Özgür E, Ünçel M, Kitaplı S, Tanrıverdi Ö, Alkan A. Breast Cancer Metastasis to Nasal Septum. Journal of Oncological Sciences. 2023;9(3):181-3.

Correspondence: Sait KİTAPLI

Department of Internal Medicine, Division of Medical Oncology, Muğla Sıtkı Koçman University Faculty of Medicine, Muğla, Türkiye

E-mail: kitaplisait@gmail.com

Peer review under responsibility of Journal of Oncological Sciences.

Received: 25 Nov 2022

Received in revised form: 28 Apr 2023

Accepted: 05 Jul 2023

Available online: 20 Jul 2023

2452-3364 / Copyright © 2023 by Turkish Society of Medical Oncology. This is an open access article under the CC BY-NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/4.0/>).



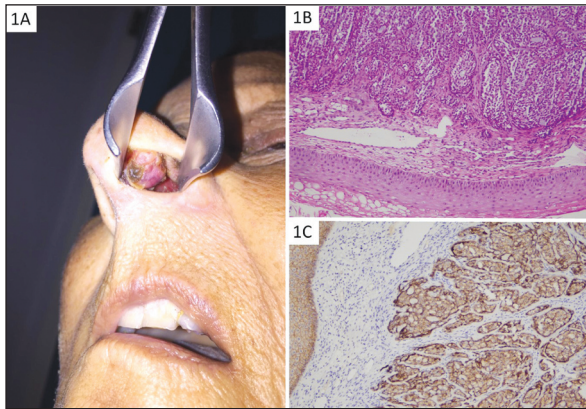


FIGURE 1: A: Physical examination, B and C: Pathological examination.

capecitabine, 4 cycles of cisplatin-gemcitabine, and 2 cycles of vinorelbine, sequentially. After 2 days of the last vinorelbine cycle, she presented with refractory epistaxis. On physical examination, a reddish and fragile mass was detected in the left nasal cavity (Figure 1A). After initial compressive measures, the bleeding was controlled. For the differential diagnosis of other pathologies, the excisional biopsy was performed. The pathological examination demonstrated solid epithelial nests and sheets with large pleomorphic cells and hyperchromatic nuclei under the mature sinonasal squamous epithelium (Figure 1B). Tumor cells were diffuse positive with E-cadherin and S100 protein, focal positive with mammaglobin; indicating the breast as the primary site of neoplasm (Figure 1C). The diagnosis was consistent with invasive ductal carcinoma metastasis. The evaluation showed progressive disease. The therapy was modified to eribulin, and the patient was fully informed and provided written consent voluntarily for the presentation of the case.

DISCUSSION

Metastasis to H&N is generally rare, while lung, prostate, renal, and liver cancers are the most common primaries in men. Breast, lung, and ovarian carcinomas are the most common primaries metastasizing to the H&N region.¹⁰ The most common distant metastatic sites of BC are the lungs and bones. Consistent with that, the H&N metastasis of BC gen-

erally presents with the involvement of bony structures. Additionally, rare cases of salivary gland, paranasal sinus, orbital, and skin metastasis are reported.³

The metastasis to the nasal cavity is extremely rare.^{9,11} Nasal cavity metastases in both cases were the recurrence of the primary BC. The initial symptoms of patients were epistaxis and visual impairment. However, the literature review showed that signs and symptoms are generally nonspecific and include recurrent epistaxis, nasal obstruction, and facial pain.¹² The management of metastatic disease in the nasal cavity includes palliative radiotherapy and in selected cases, surgery. The mainstay treatment modality in advanced disease is systemic therapy.¹³ In both cases, a surgical approach was used due to isolated metastases. However, our patient had progressive advanced disease in the lungs and bones. Therefore, we followed the patient with palliative measures. This may guide us to consider metastasis in the differential diagnosis of epistaxis in patients with cancer.

Source of Finance

During this study, no financial or spiritual support was received neither from any pharmaceutical company that has a direct connection with the research subject, nor from a company that provides or produces medical instruments and materials which may negatively affect the evaluation process of this study.

Conflict of Interest

No conflicts of interest between the authors and / or family members of the scientific and medical committee members or members of the potential conflicts of interest, counseling, expertise, working conditions, share holding and similar situations in any firm.

Authorship Contributions

Idea/Concept: Mehmet Kapan, Erdoğan Özgür; **Design:** Mehmet Kapan, Erdoğan Özgür, Melek Ünçel; **Control/Supervision:** Mehmet Kapan, Sait Kitaplı, Özgür Tanrıverdi, Ali Alkan; **Data Collection and/or Processing:** Mehmet Kapan, Ali Alkan; **Analysis and/or Interpretation:** Özgür Tanrıverdi, Ali Alkan; **Literature Review:** Mehmet Kapan, Sait Kitaplı; **Writing the Article:** Mehmet Kapan, Sait Kitaplı, Ali Alkan; **Critical Review:** Özgür Tanrıverdi, Ali Alkan; **References and Fundings:** Mehmet Kapan, Erdoğan Özgür, Melek Ünçel; **Materials:** Mehmet Kapan, Sait Kitaplı, Özgür Tanrıverdi.

REFERENCES

1. Diaby V, Tawk R, Sanogo V, Xiao H, Montero AJ. A review of systematic reviews of the cost-effectiveness of hormone therapy, chemotherapy, and targeted therapy for breast cancer. *Breast Cancer Res Treat.* 2015;151(1):27-40. [[Crossref](#)] [[PubMed](#)] [[PMC](#)]
2. Diel B, Marienhagen J, Schaefer C, Pohl F, Kölbl O. [Frequency and distribution pattern of distant metastases in patients with ENT tumors and their consequences for pretherapeutic staging]. *Strahlenther Onkol.* 2007;183(3):138-143. [[Crossref](#)] [[PubMed](#)]
3. Tracy JC, Mildenhall NR, Wein RO, O'Leary MA. Breast cancer metastases to the head and neck: case series and literature review. *Ear Nose Throat J.* 2017;96(3):E21-E24. [[Crossref](#)] [[PubMed](#)]
4. Allen A, Michals E, Karo A, Loeffler DM, Saran N. Renal cell carcinoma presenting as epistaxis from a nasal cavity metastasis. *Radiol Case Rep.* 2018;14(1):116-120. [[Crossref](#)] [[PubMed](#)] [[PMC](#)]
5. Bastier PL, Dunion D, de Bonnecaze G, Serrano E, de Gabory L. Renal cell carcinoma metastatic to the sinonasal cavity: a review and report of 8 cases. *Ear Nose Throat J.* 2018;97(9):E6-E12. [[Crossref](#)] [[PubMed](#)]
6. Prescher A, Brors D. [Metastases to the paranasal sinuses: case report and review of the literature]. *Laryngorhinootologie.* 2001;80(10):583-594. [[Crossref](#)] [[PubMed](#)]
7. Agrawal S, Jayant K. Breast cancer with metastasis to the nasopharynx and paranasal sinuses. *Breast J.* 2016;22(4):476-477. [[Crossref](#)] [[PubMed](#)]
8. Copson B, Pratap U, McLean C, Hayes T. Nasopharyngeal metastasis of breast carcinoma with HER 2 discordance: a case report. *ANZ J Surg.* 2018;88(5):508-509. [[Crossref](#)] [[PubMed](#)]
9. Weng B, Wang Q, Lin S, Lu Y. Nasal cavity metastasis of breast cancer: a case report and review of the literature. *Int J Clin Exp Pathol.* 2014;7(10):7028-7033. [[PubMed](#)] [[PMC](#)]
10. Vega LG, Dipasquale J, Gutta R. Head and neck manifestations of distant carcinomas. *Oral Maxillofac Surg Clin North Am.* 2008;20(4):609-623. [[Crossref](#)] [[PubMed](#)]
11. Liao HS, Hsueh C, Chen SC, Chen IH, Liao CT, Huang SF. Solitary nasal cavity metastasis of breast cancer. *Breast J.* 2010;16(3):321-322. [[Crossref](#)] [[PubMed](#)]
12. Özgür E, ÜH, Jurlina M. Endoscopic management of malignant sinonasal tumours. In: Cingi C, Bayar Muluk N, eds. *All Around the Nose Basic Science, Diseases and Surgical Management.* 1st ed. Cham: Springer; 2020. p.635-41. [[Crossref](#)]
13. Luong A, Citardi MJ, Batra PS. Management of sinonasal malignant neoplasms: defining the role of endoscopy. *Am J Rhinol Allergy.* 2010;24(2):150-5. [[Crossref](#)] [[PubMed](#)]