Volume 19 Issue 44
Originally issued as F7



Global Journal of Medical Research: F
Diseases
Volume 19 Issue 7 Version 1.0 Year 2019
Type: Double Blind Peer Reviewed International Research Journal
Publisher: Global Journals
Online ISSN: 2249-4618 & Print ISSN: 0975-5888

Breast Metastasis from Lung Cancer: A Case Report

By AM. Guerrouaz, F. ElMejjati, Z. Dahbi, A Ouabdelmoumen & A. Sbai, L. Mezouar

Introduction- Secondary breast tumors are rare. Breast metastases accounted for 0.4 to 2% of all mammary cancers. Melanomas, lymphomas, and lung cancers are most often the primary tumors [1]. Up to now more than 400 cases of mammary metastasis have been reported in the literature [2,3]. We report in our work the clinical case of metastatic lung carcinoma into breast.

GJMR-F Classification: NLMC Code: WC 450



Strictly as per the compliance and regulations of:



© 2019. AM. Guerrouaz, F. ElMejjati, Z. Dahbi, A Ouabdelmoumen & A. Sbai, L. Mezouar. This is a research/review paper, distributed under the terms of the Creative Commons Attribution-Noncommercial 3.0 Unported License http://creativecommons.org/licenses/by-nc/3.0/), permitting all non-commercial use, distribution, and reproduction in any medium, provided the original work is properly cited.

Breast Metastasis from Lung Cancer: A Case Report

AM. Guerrouaz [α], F. ElMejjati, Z. Dahbi [σ], A Ouabdelmoumen [ρ] & A. Sbai, L. Mezouar [ω]

I. Introduction

Secondary breast tumors are rare. Breast metastases accounted for 0.4 to 2% of all mammary cancers. Melanomas, lymphomas, and lung cancers are most often the primary tumors [1]. Up to now more than 400 cases of mammary metastasis have been reported in the literature [2,3]. We report in our work the clinical case of metastatic lung carcinoma into breast.

II. Case Report

A 51-year-old father of two, consulted for headache, vomiting, and right hemiplegia as part of an intracranial hypertension syndrome.

The initial physical examination objectified a fixed mammary mass of 5cm in size in the right breast, the axillary level was free. A mammogram showed the presence of an irregular opacity measuring 45 mm hypoechogenous on ultrasound without microcalcifications, and without axillary adenopathy classified BIRADS 4.

A biopsy of the breast mass was made, whose anatomopathological results showed an undifferentiated tumor process. Thus, an immunohistochemical study was used which showed a low differentiated squamous cell carcinoma compatible with a lung cancer.

A cerebral and cervicothoraco-abdominal CT scan was performed, showing a right apical pulmonary tumor associated with Barety's lymphadenopathy, and also revealed the presence of a right breast mass (already described in mammography).) and bilateral adrenal lesions in favor of secondary lesions. At the cerebral level there were several bilateral temporoparietal lesions with right verminal cerebellar lesion in favor of secondary lesions.

The patient was admitted to radiotherapy department where he received total brain irradiation at a dose of 30 Gy in 10 fractions of 3 Gy /fr over 2 weeks with marked clinical improvement. Afterwards he was treated with palliative chemotherapy based on Carboplatin AUC 6, Paclitaxel 175 mg / m^2 every 21 days. After the 3rd cycle there was an incomplete remission estimated at more than 70%. The evaluation after the sixth cycle treatment was in favor of stable disease.

Author α σ ρ ω: Radiotherapy Department, CHU Mohammed VI-Oujda, Morocco. e-mail: amine-jrz@hotmail.com

The patient was monitored, and 2 months later there was local, mammary and cerebral progression, so he was treated with second line chemotherapy Gemcitabine monotherapy but after 3 courses the patient presented in a critical state with a WHO score of 3 for whom he was referred for palliative care. The patient died 40 days later.

III. Discussion

Breast cancer is the most common cancer in the world, however mammary metastases from extra-mammary cancer are extremely rare accounting for less than 2% of all breast cancers [2,3,6,22].

Breast metastases may be the first revealing symptom in 8 to 33% of cases [7]. These metastases may be associated with ipsilateral axillary adenopathies in more than 50% of cases [7].

The most frequent primary cancers are melanoma, lung cancer, and lymphoma [4,5]. So far the largest study published is that of Stavros Georgiannos, et al which included 60 patients collected over a period of a century 60/14000 presented with breast metastasis (0.43%), of which 95% are female, their age varies between 12 and 90 years, the primary cancers involved in most patients were cutaneous melanomas, large and small cell lung cancers, but there were other tumors, such as endometrial adenocarcinoma, pancreatic adenocarcinoma, retinal melanoma. Other localization may be responsible of these metastases, including uterine, gastric, rectal cancers, and non-Hodgkin's lymphoma [6,8], the latter represents 17% of all mammary metastases [8]

As for metastases from gastric cancer, they were described by Krichen et al. in a case of a metastatic gastric adenocarcinoma in the ovary, the primary tumor and ovarian metastasis was resected, but after 4 months a metastatic relapse was detected as an isolated mammary metastasis of the same histological type as the gastric cancer, it was resected but the evolution was marked by the apparition of cutaneous lymphangitis of the chest wall, and emergence of lymph nodes and bone metastases [9]. And this is not the only case of gastric cancer, Boutis et al have also reported a series of 25 cases of gastric cancer associated with mammary metastases of which 13/25 has a form of signet cell ring carcinoma [10]. One of the tumors that can metastasize at the breast level are neuroendocrine tumors, the largest series of secondary breast

© 2019 Global Journals

neuroendocrine tumors reported by Upalakalin et al. [15] including 24 cases, in nine cases mammary metastasis was the revealing site of the primary tumor.

The clinical presentation of these tumors is most often as a well-rounded, hard, and painless lump located at the level of the supero-external quadrant [6,9,12,13,14]. This lump may be associated with axillary metastases [14,15,16]. As well as other metastatic lesions [15].

The mammography shows aregular round or slightly irregular nodule, not containing microcalcifications except in cases of metastases of ovarian origin [13, 14, 15, 16] and at the mammary ultrasound they appear a hypoechogenic, without acoustic shadowing.

Histologically, intramammary metastases have different characteristics of a primary breast cancer, in fact most intra-mammary metastases have histology similar to that of the tumor from which it comes [22].

For example in the case of metastases from ovarian cancer we ofern found the presence of intra-metastasis microcalicifications [14,16].

But one can be mistaken in making the diagnosis of a primitive breast cancer [17,18,19,20]. To overcome this problem we must use immunohistochemistry that will allow us to differentiate a primary cancer from a metastasis, usually for primitive breast cancer the CK7 is positive, CK20 is negative and the hormone receptors are positives. In the case of metastasis, CK 7 (-) and hormone receptors are negatives [14,15]. To guide the diagnosis to the primary tumor, we can look for certain tumor markers such as TTF1 (lung cancer or thyroid cancer) and desmin (soft tissue tumors) [21]. On the other hand, the elevation of some serum markers can be useful to make the diagnosis: ACE (colon cancer), CA19-9 (pancreatic cancer), CA 125 (ovarian cancer, or gastrointestinal cancer).

The management of mammary metastases must be part of the treatment of the primary cancer in question and consists of palliative chemotherapy, and it may be combined with palliative radiotherapy if needed [22].

Surgical treatment is not indicated in these cases except in cases of primary surgery to make the dignosis[15] or more rarely in the case of a very advanced mammary metastases[17]. Until now there are no studies that support axillary dissection in cases of mammary metastasis associated with axillary adenopathies, and this will only increase postoperative morbidity [23,24].

The prognosis is generally poor and depends on the primary cancer. In the Lee et al study the mean survival in 32 patients with breast metastasis was 13.9 months [15].

IV. Conclusion

Breast metastases are exceptional tumors. Their diagnoses are difficult and require a radio-clinico-pathological arguments. Their treatment consists of palliative chemotherapy and surgical treatment is to be avoided (mastectomy). Their prognoses depend on the primary tumor but are usually of poor prognosis.

Bibliography

1. Domanski H A. Metastases to the breast from extramammary neoplasms: a report of six cases with diagnosis by fine needle aspiration cytology. Acta Cytol 1996; 40: 1293–300.
2. [Georgiannos SN, Aleong JC, Goode AW, Sheaff M. Secondary neoplasms of the breast. A survey of the 20th century. Cancer 2001; 92: 2259—66.
3. Alva S, Shetty-Alva N. An update of tumor metastasis to the breast data. *Arch Surg* 1999; 134(4): 450.
4. Cangiarella J, Symmans W F, Cohen JM, Goldenberg A, Shapiro RL, Waisman J. Malignant melanoma metastatic to the breast: a report of seven cases diagnosed by fine-needle aspiration cytology. *Cancer* 1998; 84(3): 160 –2.
5. P. Assoulinea,∗, M.-B. Léger-Ravetb, R. Saffroyc,J. Hamelinc, A. Bénissadd, P. Husleaga, Métastases mammaires des cancers broncho- pulmonaires avec mutationd e l'EGFR
6. S. Charfia, S. Krichen Maknia,∗, A. Khanfirb, K. Abbes. Les métastases mammaires: étude anatomoclinique de six cas. J Gyn Obst et Biologie de la Reproduction (2008) 37, 346—352.
7. Hajdu S I, Urban J A. Cancers metastatic to the breast. Cancer1972; 29: 1691—6.
8. Duncan V E, Reddy V V, Jhala N C, Chhieng D C, Jhala D N. Non- Hodgkin's lymphoma of the breast: a review of 18 primary and secondary cases. Ann Diagn Pathol 2006; 10: 144—8.
9. S. Krichen Maknia, K. Abbesa, A. Khanfirb,*, M. Frikhab, T. Sellami Boudawara. Metastatic signet ring cell carcinoma to the breast from stomach. Cancer/Radiothérapie 11 (2007) 276–279.
10. Boutis A L, Andreadis C, Patakiouta F, Mouratidou D. Gastric signet-ring adenocarcinoma presenting with breast Metastasis. World J Gastroenterol 2006; 12: 2958—61.
11. Upalakalin J N, Collins L C, Tawa N, Parangi S. Carcinoid tumors in the breast. Am J Surg 2006; 191: 799—805.
12. Alexander H R, Turnbull A D, Rosen P P. Isolated breast metastases from gastrointestinal carcinomas: report of two cases. J Surg Oncol 1989; 42: 264–6.
13. Yeh C-N, Lin C-H, Chen M-F. Clinical and ultrasonographic characteristics of breast

© 2019 Global Journals

metastases from extramammary malignancies. Am Surg 2004; 70(4): 287–90.
14. Lee AHS. The histological diagnosis of metastases to the breast from extramammary malignancies. J Clin Pathol 2007; 60(12): 1333–41.
15. Lee S K, Kim W W, Kim S H, Hur S M, Kim S, Choi J H, et al. Characteristics of metastasis in the breast from extramammary malignancies. J Surg Oncol
16. Recine M A, Deavers M T, Middleton L P, Silva E G, Malpica A. Serous carcinoma of the ovary and peritoneum with metastases to the breast and axillary lymph nodes: a potential pitfall. Am J Surg Pathol 2004; 28(12): 1646–51.
17. Khalifeh I, Deavers M T, Cristofanilli M, Coleman R L, Malpica A, Gilcrease M Z. Primary peritoneal serous carcinoma presenting as inflammatory breast cancer. Breast J 2009; 15(2): 176–81.
18. Tanaka Y, Bhunchet E, Shibata T. A case of malignant eccrine spiradenoma metastatic to intramammary lymph node. Breast Cancer 2008; 15(2): 175–80.
19. Shaw C, O'Hanlon D M, O'Keane C, Kerin M J. Malignant phaeochromocytoma metastasising to the breast. Ir J Med Sci 2003; 172(1): 41–2.
20. Ravdel L, Robinson W A, Lewis K, Gonzalez R. Metastatic melanoma in the breast: a report of 27 cases. J Surg Oncol 2006; 94(2): 101–4.
21. Williams S A, Ehlers 2nd R A, Hunt K K, Yi M, Kuerer H M, Singletary SE, et al. Metastases to the breast from nonbreast solid neoplasms: presentation and determinants of survival. Cancer 2007; 110(4): 731–7.
22. Silverman J F, Feldman P S, Covell J L, Frable W J. Fine needle aspiration cytology of neoplasms metastatic to the breast. Acta Cytol 1987; 31: 291—300.
23. Whelan TJ et al. Regional Nodal Irradiation in Early-Stage Breast Cancer.N Engl J Med. 2015 Jul 23; 373(4): 307-16. doi: 10.1056/NEJMoa1415340.
24. Mohaned O. Abass et al. Axillary Lymph Node Dissection for Breast Cancer: Efficacy and Complication in Developing Countries. J Glob Oncol 2018; 4: JGO.18.00080.

© 2019 Global Journals