Rare presentations of Synchronous carcinoma Breast with Lymphomas (Hodgkin's Non-Hodgkins) and its Management.

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Abstract: Objective- Synchronous carcinoma breast with lymphomas in distant sites is a rare presentation and only very few cases were reported in literature and in our institute 2 such cases were presented. The primary aim of this article is to discuss treatment response of such rare presentations. Materials and methods Two patients were reported with Synchronous carcinoma breast with lymphomas in distant sites to our institute from June-Nov 2014 and they were managed with multi modality approach. Radiotherapy was also the predominant treatment modality for these patients. A 45 years old female presented with complaints of lump in the left breast and on examination, there was right axillary node palpable and on Histopathological examination she was detected to have Carcinoma left breast with Hodgkin's lymphoma (mixed cellularity type) and another 77 years old female with hypertension presented with complaints of lump in the right breast with sore throat and on evaluation she was diagnosed to have carcinoma of right breast with Non-Hodgkin's lymphoma (DLBCL) of Right side tonsil and both the cases were managed with multidisciplinary approach. Results - Both the rare presentations with Carcinoma breast and lymphomas were treated with multimodal approach and in both the cases the results were satisfactory. Keyword: Hodgkin's lymphoma, Non- Hodgkin's lymphoma, Diffuse Large B-Cell lymphoma.

Introduction: Synchronous carcinoma of breast and lymphomas in some other sites is a rare presentation and only few cases were reported in the literature because both the etiology and HPE wise both are different entities. Carcinoma breast arises from epithelial cells and it's etiology, risk factors, natural history and Management are quite different from Lymphomas. A family history of breast cancer remains the strongest risk factor for the disease. Management of Locally advanced carcinoma breast: Combined Multi-modal therapy Neo-adjuvant chemotherapy followed by surgery followed by completion chemotherapy and then loco regional RT (plus tamoxifen if ER +ve). General Management of Hodgkin's lymphoma Radiation Therapy Radiation therapy is the most effective single therapeutic agent for treating Hodgkin lymphoma. Chemotherapy With the introduction of doxorubicin (Adriamycin), completely novel drug combinations were developed. The most successful of these is ABVD, which includes doxorubicin, bleomycin, vinblastine, and dacarbazine. Combined-Modality Therapy Combined-modality for patients with Hodgkin lymphoma. Important considerations in combined-modality therapy include the sequence of therapy, the selection of irradiation fields, the decision to irradiate all involved sites or only bulky sites, the prescription of dose, and potential overlapping toxicities. It is logical to initiate treatment with chemotherapy. This has the advantages of treating all sites of disease at the outset (especially important in stage III or IV) and reducing bulky disease to facilitate subsequent irradiation (especially in the mediastinum). The irradiation dose used in combined-modality studies in adults ranges from 20 to 36 Gy. Non- Hodgkin's Lymphoma (NHL) NHL is a heterogeneous group of malignancies of the lymphoid system characterized by an abnormal clonal proliferation of B cells, T cells, or both. Principles of Treatment of NHL Surgery Before modern radiotherapy and chemotherapy, surgical resection n constituted the only potentially curative treatment for NHL. It was commonly used for extranodal sites such as the stomach or head and neck and was curative in a significant percentage of patients when the disease was truly localized. Similarly, patients with nodal presentations and localized disease were managed by radical surgical procedures. The surgical approach subsided rapidly with the development of radiotherapy and chemotherapy, surgical resection n constituted the only potentially curative treatment for NHL. It was commonly used for extranodal sites such as the stomach or head and neck and was curative in a significant percentage of patients when the disease was truly localized. Similarly, patients with nodal presentations and localized disease were managed by radical surgical procedures. As a consequence, radiation fields can often be somewhat larger to cover potential microscopic areas of spread. Methods and materials: Patients: Case 1: A 45 years old multiparous, who attained surgical menopause 3 year back, presented to our OPD in July 2014 with the complaints of lump in the left breast of 2 months duration and on examination there was 7X6 cm tumor palpable in the left breast in the upper quadrant and central sector, no PDO was present and muscle and chest wall are free.

Left Axillary node
In left axilla few nodes were palpable and in right axilla 2.5-3cm node was palpable and the HPE with IHC correlation was suggestive of Hodgkin’s lymphoma- Mixed cellularity (CD 30, CD 15, CD 20 & CD 68 Show strong positive reactions).

Hodgkins Lymphoma
The Trucut biopsy from left breast was suggestive of Invasive carcinoma High grade and ER/PRNegative and Cerb-B2-Negative.

Invasive carcinoma of breast Metastatic work-up for breast
Chest X-Ray- Fibrosis right upper lobe.
Mammogram contralateral breast –Fibrocystic changes and small sub centimetric cyst. Other metastatic workup were within normal limit.

Metastatic work-up for Hodgkin’s lymphoma
PET/CT Scan- Irregular soft tissue dermatitis in left breast upper outer quadrant with multiple illdefined lesion in all quadrant (SUV-2.4). Left axillary lymph node- SUV-2.4. Multiple lymph node in right axillary group-SUV-13.9. Intraabdominal lymph node (mesenteric, aorta caval both with SUV -4.5). Cervical lymph node (B/L-Level IV SUV-8.9, Right lower jugular SUV-9.8).

Diagnosed to have carcinoma of left breast (TNM stage T3N1MO) and Hodgkin’s lymphoma stage IIIA (Mixed cellularity type).
Case was discussed in Multi speciality board meet and in CPC and decided to start with AVD (Adriamycin, Vinblastine and Dacarbazine) and reassess for response (Bleomycine was not considered since the chest X-Ray shown pulmonary fibrosis). The case was reassessed after 2 cycles of AVD and there was definite progression of the breast lesion so it was decided to Start FEC-60 (5- FU, Epirubicin 60mg/m2 and cyclophosphamide) along with Radiation therapy to left breast and nodal regions. Following 2nd cycle of FEC-60 patient developed low count and it was decided to start Single agent Docetaxel with G-CSF support and until January 2015 patient received 2 cycles of AVD, 2 Cycles of FEC-60 and 3 Cycles of single agent Docetaxel and lesions in breast primary and nodal regions regressed well and planning for left Modified Radical Mastectomy (MRM).

Case 2.
A 77 Years old postmenopausal and multiparous with hypertension as comorbid presented to our OPD with complaints of lump in the right breast with sore throat and on evaluation it was diagnosed to have infiltrating ductal carcinoma of right breast (TNM Stage T4bNxBMx) with Non-Hodgkin’s lymphoma (DLBCL) (LCA, CD20, CD3, Bcl2, ki67 show strong positive reactions) of Right side tonsil (Stage IIA, DLBCL type).

Mammogram with spiculated margins
Infiltrating Ductal carcinoma of breast
DLBCL
The patient was not planned for surgery since the patient developed cutaneous nodule and patient was started on Mini R-CHOP and completed 6 cycles of chemotherapy on 18/8/2014 post 6 cycles of chemotherapy assessment shown complete regression of breast primary and the response to chemotherapy was satisfactory.
PET/CT Scan on 23/9/14- Shown ildefined soft tissue of right breast indensity lesion in Lower inner quadrant and infiltrating pectoralis muscle (SUV-14). Hypertrophied lingual tonsil involving tongue (SUV 6.1). Neck nodes B/L-Level IIIA (SUV-2.9) and mediastinal node involving left upper paratracheal, right paratracheal and prtreacheal region (SUV- 6.3) and patient was treated with Radiation therapy to right tonsil to Total dose:30Gy using 3- Dimensional conformal therapy and patient tolerated treatment with satisfactory response to tonsillar primary.

CONCLUSION:
Even though Synchronous carcinoma of breast with lymphomas (both Hodgkin’s and Non-Hodgkin’s) in some other site is rare presentation, it can be managed successfully with multimodal treatment approach and Radiation therapy plays a significant role in such cases.

References
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