Case Report:
Multiple Myeloma Following Primary Solid Carcinoma Post Therapy: Report of Two Cases

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Citation

Abstract: Secondary malignancies following treatment of primary carcinomas have been reported in the literature and serious debate has emerged regarding the risk of secondary malignancies post therapy along with risk associated with different regimens. (chemotherapy / radiotherapy). The present report describes two cases of multiple myeloma following carcinoma cervix and intraductal carcinoma breast post therapy after three and fifteen years respectively and thus highlights the risk of multiple myeloma associated with different regimens of treatment of solid carcinomas. It also lays the importance of balance between the benefits of therapy of carcinoma and the risk of treatment associated multiple myeloma. The cases specify the need of vigilant follow up of any primary carcinoma, irrespective of time, in the light of early detection of secondary malignancy.

Key Words: Multiple myeloma, Carcinoma cervix, Ductal carcinoma breast, Post-therapy

Introduction:
Secondary malignancies following primary carcinomas have been reported and serious debate has emerged regarding risk of secondary malignancies post therapy,[1,2] The present report describes two cases of multiple myeloma following carcinoma breast and carcinoma cervix and highlights associated risk of myeloma with carcinoma post-therapy.

Case Report:
Case 1: 63 year old female, diagnosed with infiltrating ductal carcinoma, underwent mastectomy, chemotherapy comprising six cycles every 28 days of doxorubicin (60mg/m2) and paclitaxel (200mg/m2) along with radiotherapy. After 15 years she developed scapular erosion and to rule out possibility of metastasis, bone marrow examination and serum electrophoresis was advised which confirmed multiple myeloma. (Figure 1) Chemotherapy was started comprising of bortezomib and dexamethasone but eventually she succumbed to her illness.

Case 2: 66 year old female who was diagnosed with carcinoma cervix (squamous cell carcinoma) in 2008 received 25 cycles of radiotherapy. After 3 years she developed nostril mass for which she was advised FNAC, bone marrow examination and serum electrophoresis which confirmed multiple myeloma. (Figure 2) Chemotherapy comprising of bortezomib and dexamethasone was started and presently she is on follow up.

Discussion
Acute myeloid leukemia, myelodysplastic syndrome and chronic lymphocyte leukemia have been reported post breast carcinoma following different regimens of therapy.[3,4] However, rarely studies regarding secondary multiple myeloma have been described in literature.[1,5] The present case report describes two cases of secondary multiple myeloma developing after 15 years of carcinoma breast and three years after carcinoma cervix highlighting the variable period of presentation of secondary malignancy. Risk of radiation induced leukaemia is attributed to exposure of large areas of bone marrow and therefore pelvic region irradiation may be responsible for risk of secondary hematological malignancies.[6,7] The present report also highlights that one case received only pelvic radiotherapy. Statistical significant association has been reported between chemotherapy and leukemia risk.[8] An important limitation of the report is that no cytogenetics study was carried out in both the patients and so the association of any mutational abnormalities with secondary multiple myeloma could not be assessed.

To conclude, the report describes two cases of multiple myeloma following solid carcinoma post therapy and highlights the risk associated with different regimens of treatment. It lays the importance of balance between the benefits of carcinoma therapy and risk of treatment associated multiple myeloma. It also specifies the need of vigilant follow up of primary carcinoma, irrespective of time, for early detection of any secondary malignancy.
Figure 1: (A) Histopathological section showing infiltrating ductal carcinoma of breast (Hematoxyline eosin, x4); (B) Bone marrow aspirate of same case showing multiple myeloma (May Grunwald Giemsa, x40).

Figure 2: (A) Histopathological section showing Squamous cell carcinoma of cervix (Hematoxyline eosin, x4x10); (B) Bone marrow aspirate of same case showing multiple myeloma (May Grunwald Giemsa, x4).

References