CASE REPORT

CUTANEOUS INVOLVEMENT IN MULTIPLE MYELOMA AT AN UNUSUAL SITE: A RARE CASE REPORT

Lohit Kumar Kalita[1], Chayanika Kalita[2], Pabitra Kumar Gogai[3], Umesh Ch. Sarma[4]

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ABSTRACT: Multiple myeloma is a rare cancer. According to the most recent data from the Surveillance, Epidemiology, and End Results (SEER) program, multiple myeloma is the second most common haematological malignancy in the U.S. (after non-Hodgkin lymphoma), constitutes 1% of all cancers and constitutes 2% of all cancer deaths. Cutaneous involvement of multiple myeloma during treatment period is uncommon with fewer described in literature. Moreover, metastatic cutaneous involvement at the sole of the foot during treatment period of a IgA kappa type multiple myeloma patient followed by death has not encountered in literature. We have reported such a case.
KEYWORDS: Multiple myeloma, Cutaneous, Plasma cell.

INTRODUCTION: Multiple Myeloma is a malignant proliferation of plasma cell and plasmacytoid cells characterised nearly always by the presence, in the serum and/or urine, of a monoclonal; immunoglobulin (Ig) or Ig fragment.[1] The incidence of myeloma is 1–9 per 100,000 per year worldwide with a higher incidence in North America (7.1 per 100 000 population for men and 4.6 per 100 000 for women) and lower in Asia (China, Japan and India). Clinical manifestations of multiple myeloma vary as a result of heterogenous biology, spanning of entire spectrum from indolent disease to highly aggressive myeloma with extramedullary features. In the extramedullary component, cutaneous involvement of multiple myeloma at the sole of the foot is extremely rare and more so during treatment period.[2,3] Moreover, the appearance of metastatic diffuse interstitial type nodular skin lesion at the sole of the foot during treatment period of multiple myeloma followed by death within two months has not encountered in literature as happened in our case.

THE CASE REPORT: A 69-year-old man, with a past medical history of hypertension, came to OPD complaining of a growth at the right sole of foot, generalized bony pain, severe weakness, easy fatigability, weight loss and loss of appetite. All there these symptoms were progressive in nature. Laboratory investigations revealed Haemoglobin 7.9 g/dl, ESR 150 mm AEFR, RBS 105 mg/dl, Serum creatinine 2.6 mg/dl, serum calcium 10.2m g/dl, blood urea 79 mg/dl, serum protein electrophoresis showed M-band, serum light chain immunoglobulin assay total IgA 29.40 g/L (1.03–5.91 g/L), total IgG 6.7 g/L (6.6-16.9 g/L), total IgM 0.18 G/L (0.37–2.58 g/L); serum light chains (kappa & lamda) – kappa light chain 4150 mg/L (3.30–19.40 mg/L), Lamda Light chain 18.10 mg/L (5.71-26.30 mg/L), kappa lamda ratio 229.282 (0.26–1.65), Beta2 microglobulin 4.15 mg/L (0.81–2.19 mg/L). X-ray pelvis, skull, long bones and chest showed multiple punched out radiolucent lytic areas (Figure-1). Histopathology of bone marrow aspiration

showing diffuse infiltration by plasma cells (Figure-2). USG of abdomen demonstrated medical renal disease. With these findings patient was diagnosed as multiple myeloma, International Stagging System stage-III, IgA kappa subtype. Consequently the patient received Bortizimib-Dexamethasone chemotherapy regimen. After ten months of therapy, the patient developed a papule over the right sole of the foot that became enlarged within a short period of time. The lesion was skin coloured, nontender, firm in consistency, smooth surface and adherent to the underlying structures (Figure-3). Fine Needle Aspiration biopsy was taken which revealed it as deposition of plasma cells (Figure-4). X-ray of the foot shows no lytic lesions of bone (Figure-5). Based on all these findings, the diagnosis of multiple myeloma with cutaneous involvement was established.

DISCUSSION: Cutaneous involvement in patients with multiple myeloma is very uncommon with fewer than 100 cases described in the literature.[2,3] Generally, metastatic cutaneous lesions generally appear late in the course of untreated multiple myeloma. Nevertheless, they may occur as the first manifestation of the disease[4] or at an earlier stage. In our reported case the skin lesions appeared ten months after treatment of the multiple myeloma which is an unusual phenomenon. Cutaneous involvement in multiple myeloma occurs most frequently in middle age to older males with the IgG and IgA subtype.[5] It is associated in 56% of cases with IgG subtype multiple myeloma[6]. But our case is IgA subtype which is relatively rare. Skin lesions appear commonly as multiple papules, plaques, and/ or cutaneous and subcutaneous nodules, with firm consistency, smooth surface, and skin-colored, red or violaceous color.[7] In our case skin lesion appeared in the form of subcutaneous nodule. The skin lesions may appear at any site of the skin, but have been reported most commonly on the back, abdomen, and less frequently, on the scalp, face, and extremities. Only one case reported in the literature was localized to the oral mucosa, the tongue.[8] In that sense, our case purports to be the first to illustrate multiple myeloma of the sole of the foot. The cutaneous lesions from multiple myeloma, occur most commonly as direct extension from underlying bone lesions. As it was in the case of our patient, the skeletal survey did not show any bony lesions underlying the cutaneous lesions. The occurrence of metastatic skin lesions is a rare phenomenon.[3,6] that happened in our case. Histopathologically, the skin lesions of multiple myeloma show two distinct patterns: interstitial and nodular. This latter is the most prevalent.[8] The histological aspect in our case showed a diffuse interstitial pattern with a trabecular disposition of neoplastic plasma cells which is a rare finding. Recent cytogenetic studies,[3,5,8] whether in bone marrow plasma cells or in skin lesions, have demonstrated that the deletion of the retinoblastoma gene (rb-1) is a great marker of aggressive clinical and biologic course and poor response to chemotherapy. Unfortunately, this cytogenetic study was not done in our case. The patient died after two months after appearance of the lesion. The clinical course was characterized by a rapid progression of the illness and the death of the patient two month after the onset of the skin lesions. This supports the belief that cutaneous involvement in multiple myeloma is a poor prognosis factor.

CONCLUSION: Cutaneous involvement of multiple myeloma in the sole of the foot during treatment period is possible although it is not evident in literature till now. Moreover, it support the fact that cutaneous involvement of multiple myeloma is a bad prognostic sign.

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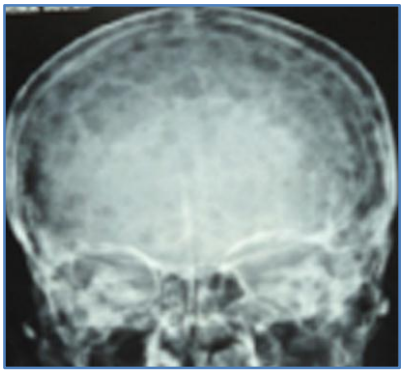

Fig. 1: Multiple punched out lytic lesions of skull

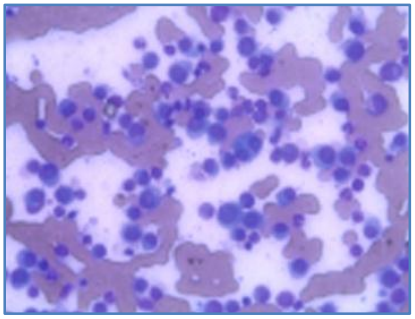

Fig. 2: Histopathological examination of bone marrow shows profuse number of plasma cell (H & E: 10X)

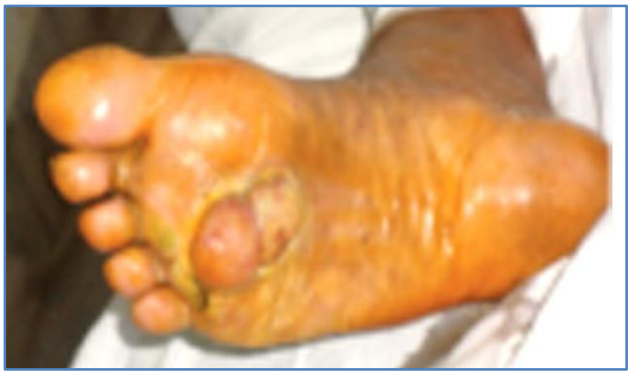

Fig. 3: Nodular lesion over the sole of the foot of the patient

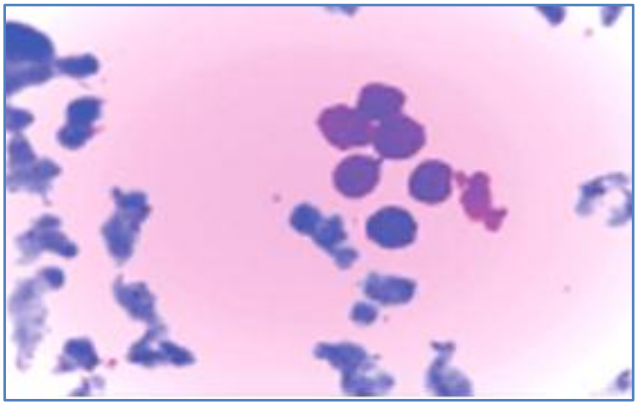

Fig. 4: FNAC of the lesion shows plasma cells (H & E: 40X)

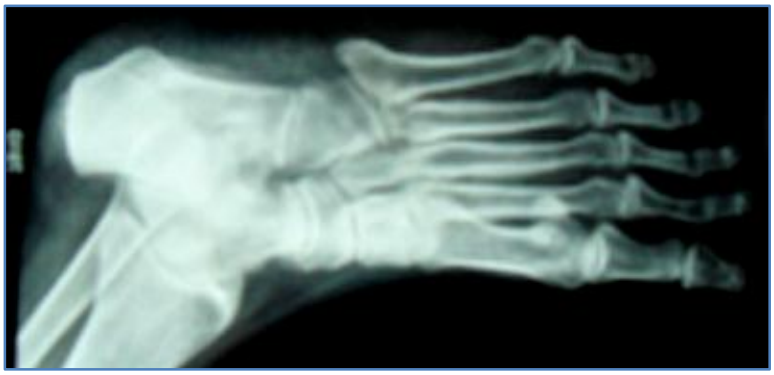

Fig. 5: X-ray of the foot shows no radiolucent lytic lesions of underlying bone

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AUTHORS:

1. Lohit Kumar Kalita
2. Chayanika Kalita
3. Pabitra Kumar Gogai
4. Umesh Ch. Sarma

PARTICULARS OF CONTRIBUTORS:

1. Assistant Professor, Department of Oncology, Gauhati Medical College, Guwahati, Assam, India.
2. Assistant Professor, Department of Dermatology, Gauhati Medical College, Guwahati, Assam, India.
3. Professor & HOD(Rtd), Department of Clinical Haematology, Gauhati Medical College & Hospital, Guwahati, Assam, India.
4. Vice-Chancellor, Srimanta Sankaradeva University of Health Sciences, Narakasur Hill Top, Guwahati, Assam, India.

NAME ADDRESS EMAIL ID OF THE CORRESPONDING AUTHOR:

Dr. Lohit Kumar Kalita,
Department of Oncology,
Gauhati Medical College,
Guwahati, Assam.
E-mail: lkkalita2013@gmail.com

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