

Macrofocal multiple myeloma with frontal plasmacytoma

Kamal Kant Sahu,¹ Pramod DA Kumar,² Uday Yanamandra,^{1,3} Pankaj Malhotra¹

¹Departments of Hematology and Internal Medicine, Post Graduate Institute of Medical Education and Research, Chandigarh, India

²Department of Internal Medicine, Post Graduate Institute of Medical Education and Research, Chandigarh, India

³Department of Internal Medicine, Armed Forces Medical College, Pune, Maharashtra, India

Correspondence to
Dr Uday Yanamandra,
udayj2@gmail.com

Accepted 8 May 2015

DESCRIPTION

A 27-year-old man presented with a 5-month history of left-sided forehead swelling. The patient had no other symptoms. Examination was unremarkable except for pallor and swelling of the left frontal bone displacing the orbit in a downward and outward direction (**figure 1A, B**).

The patient had normochromic normocytic anaemia (haemoglobin 8.7 g/dL) with normal total leucocyte count (3900/ μ L) and platelet count (200 000/ μ L). His renal parameters (urea 29 mg/dL, creatine 0.66 mg/dL) as well as serum calcium level (9.2 mg/dL) were normal. Positron emission tomography CT showed intense fluorodeoxyglucose uptake in left frontal region accompanied by multiple lytic lesions (**figure 2A–D**). Fine-needle aspiration from forehead swelling was suggestive of plasmacytoma (**figure 3**). Bone marrow showed 8% plasma cells. There was no paraproteinaemia, based on normal serum/urine protein electrophoresis and serum

immunofixation. A serum β 2-microglobulin (2.1 mg/L) and serum free light chain study was normal. Diagnosis of macrofocal multiple myeloma (ISS-I, C-R-A+B+) was made.

The patient received six cycles of chemotherapy (dexamethasone 40 mg weekly, thalidomide 100 mg daily) followed by thalidomide maintenance owing to financial constraints and non-affordability for autologous haematopoietic stem cell transplantation. His forehead swelling disappeared following three cycles (**figure 1C, D**).

Presence of extramedullary plasmacytoma (commonly involving soft tissue, lungs, pleura, genitourinary system and skull) is associated with poor outcome.¹ Macrofocal multiple myeloma is a distinct entity (with multiple lytic lesions and no bone marrow involvement) with superior rates of survival.² Orbital plasmacytomas are treated differently by various authors, using radiotherapy, local dexamethasone injection or systemic chemotherapy.³



Figure 1 (A) Frontal view showing protuberant mass in left forehead causing downwards and outwards displacement of orbit pretherapy. (B) Left lateral view showing protuberant mass in left forehead causing downwards displacement of orbit pretherapy. (C and D) Frontal and left lateral views showing resolution of forehead swelling postchemotherapy.



CrossMark

To cite: Sahu KK, Kumar PDA, Yanamandra U, et al. *BMJ Case Rep* Published online: [please include Day Month Year] doi:10.1136/bcr-2015-210759



Figure 2 (A) X-ray of the skull (Water's view) showing increased scalloping of frontal sinus of left as compared with right side (pretherapy). (B–D) Positron emission tomography CT showing intense fluorodeoxyglucose uptake in the heterogeneously enhancing soft tissue mass lesion in the left frontal, manubrium sterni, multiple vertebral bones and right head of the tibia (pretherapy).

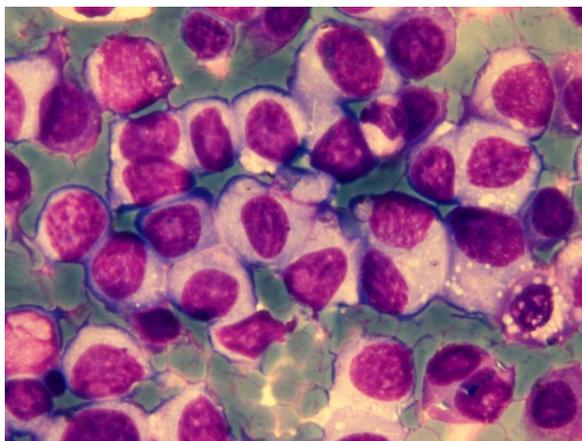


Figure 3 Fine-needle aspiration from the forehead swelling showing infiltration by plasma cells suggestive of plasmacytoma (H&E staining—oil immersion— $\times 1000$).

Acknowledgements The authors would like to acknowledge the cooperation extended by Professor BR Mittal and the Nuclear Medicine Department.

Contributors All authors were actively involved in the management of the patient at various stages of his illness. UY and KKS were involved in manuscript preparation.

Competing interests None declared.

Patient consent Obtained.

Provenance and peer review Not commissioned; externally peer reviewed.

REFERENCES

- 1 Gozzetti A, Marchini E, Banchi B, *et al*. Extramedullary multifocal plasmacytoma relapse in multiple myeloma. *Leuk Res* 2012;36:e34–6.
- 2 Dimopoulos MA, Pouli A, Anagnostopoulos A, *et al*. Macrofocal multiple myeloma in young patients: a distinct entity with favorable prognosis. *Leuk Lymphoma* 2006;47:1553–6.
- 3 Painter SL, Dickens E, Elston JS. Isolated extraocular muscle infiltration with plasmacytoma treated with localized injection of dexamethasone. *J Neuroophthalmol* 2015;35:168–70.

Learning points

- ▶ Macrofocal multiple myelomas have improved rates of survival owing to low tumour burden despite multiple lytic bone lesions.
- ▶ Macrofocal multiple myelomas have higher response rates to primary treatment.
- ▶ Patients are treated either with radiotherapy or chemotherapy in extramedullary plasmacytomas and macrofocal multiple myeloma.

Copyright 2015 BMJ Publishing Group. All rights reserved. For permission to reuse any of this content visit <http://group.bmj.com/group/rights-licensing/permissions>.
BMJ Case Report Fellows may re-use this article for personal use and teaching without any further permission.

Become a Fellow of BMJ Case Reports today and you can:

- ▶ Submit as many cases as you like
- ▶ Enjoy fast sympathetic peer review and rapid publication of accepted articles
- ▶ Access all the published articles
- ▶ Re-use any of the published material for personal use and teaching without further permission

For information on Institutional Fellowships contact consortiasales@bmjgroup.com

Visit casereports.bmj.com for more articles like this and to become a Fellow