

## INTRODUCTION

In Multiple Myeloma (MM), neurological complications due to spinal compression or vertebral lesions are common, but central nervous system (CNS) involvement is a rare extramedullary manifestation at diagnosis, with dismal prognosis (median overall survival of 3 months).

## CASE DESCRIPTION

### Identification

- ♂, 53-year-old
- Caucasian
- Previous medical history: headache and left-upper limb tremor, with several years history; Chronic Gastritis;

### Physical examination

- ECOG PS 3
- dysphonia and dysphagia.
- IX, X, XI and XII cranial nerves palsies

### Bone lesions

- **Skull:** multiple lytic lesions; skull base expansive bone lesion (26x17mm) reaching the foramen magnum;
- Multiple **vertebral** lytic lesions; T12 pathologic fracture

### Laboratorial

- **Anaemia** (9.8 g/dL), no hypercalcemia or kidney injury.
- Electrophoresis and immunofixation: **monoclonal M protein IgG/κ** (3,69g/dL)

### Bone marrow examination

- 37% abnormal plasmocytes (No FISH analysis performed in the hospital of origin; patient refused new bone marrow aspiration)

**Multiple Myeloma IgG/κ**  
(ISS stage II).

## FRONTLINE TREATMENT

- **WBI (30Gy in 10 fractionated doses) + VCD** – due to poor PS and dysphagia (PEG, thalidomide pills couldn't be crushed)

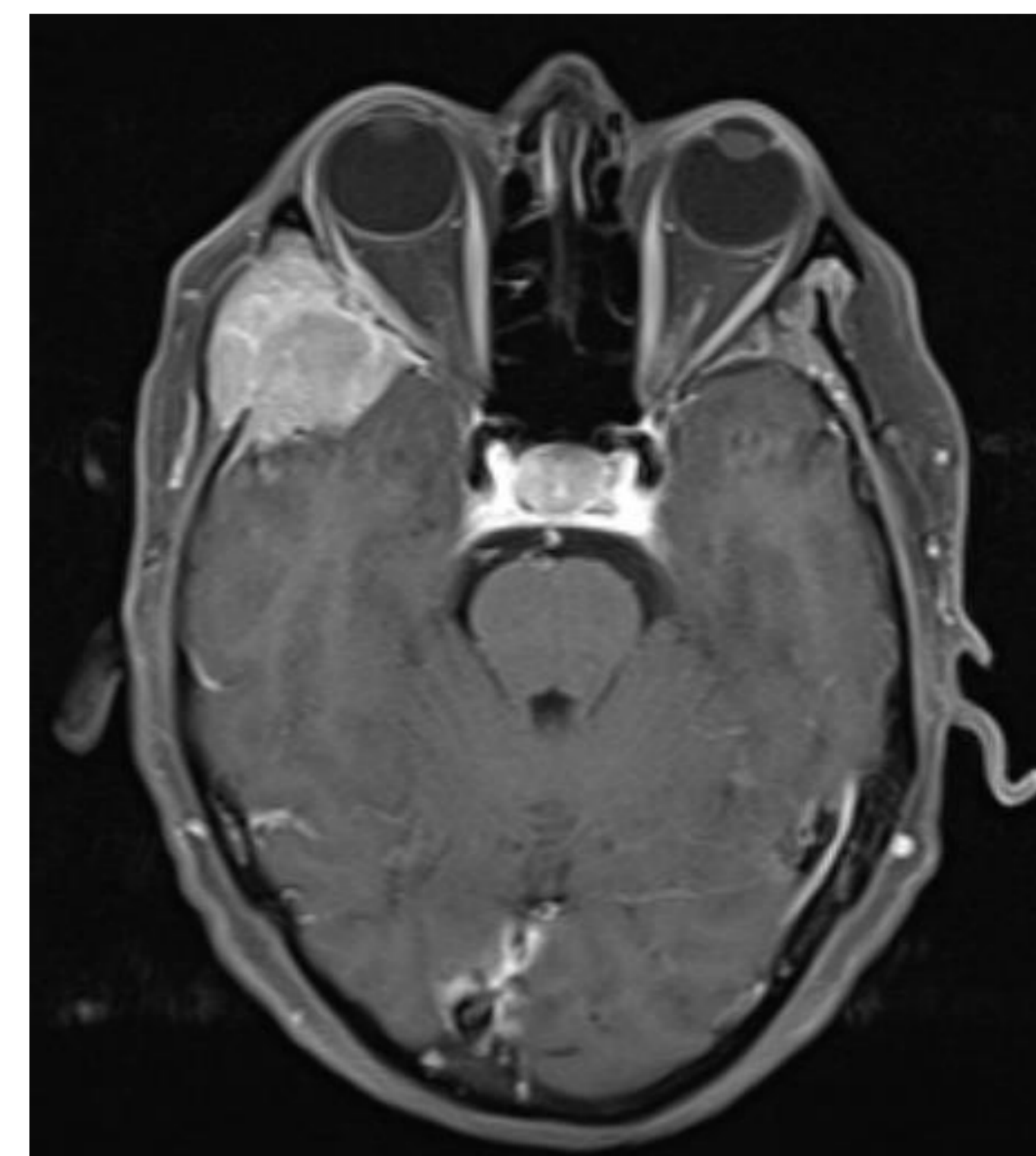


Figure 1. Axial T1 cranioencephalic MRI. Sphenoidal right greater wing extra-axial lesion.

## PROGRESSION at the 3<sup>rd</sup> cycle:

- hypercalcemia, AKI
- new sphenoidal bone lesion (Plasmacytoma? Biopsy not possible due to surgical risk) with intracranial and intraocular expression and meningeal invasion, detected by lumbar puncture
- <10% BM plasmocytes → no FISH analysis → **EXTRAMEDULLARY RELAPSE**



## 2<sup>nd</sup> LINE TREATMENT

- **2xPACE + intrathecal triple chemotherapy** until CSF plasmocytes clearance
- Response → VGPR
- **Rd** until **ASCT**

**2<sup>nd</sup> PROGRESSION** → death 3 months after ASCT

## CONCLUSION

CNS involvement in MM is uncommon, occurring in 1% of MM patients. Most cases described show this type of neurological complications in patients with relapsed/refractory disease. We describe a case of a patient with cranial nerves palsy at initial presentation. MM involving CNS carries poor prognosis, and despite the different treatments implemented, patient died 1 year after diagnosis. Due to their known CNS penetration, aggressive treatments with cytotoxic chemotherapy and radiotherapy in association with immunomodulators might be an option.

## REFERENCES

- Fitzgerald, E., Kiely, P., & Leary, H. (2019). Intracranial Involvement in Multiple Myeloma Presenting as a Cranial Nerve Palsy. *Journal Of Hematology*, 8(1), 29-33.
- KASHYAP, R., KUMAR, R. and KUMAR, S. (2010), Cranial nerve palsy in multiple myeloma and solitary plasmacytoma. *Asia-Pacific Journal of Clinical Oncology*, 6: 251-255. doi:10.1111/j.1743-7563.2010.01327.x
- Pak, Neda & Shakki Katouli, Fatemeh & Radmard, Amir Reza & Katuli, Mohammad & RezwaniFar, Mohamad & Boroujeni, Negar. (2018). Multiple Cranial Nerve Palsy Concomitant with Leptomeningeal Involvement in Multiple Myeloma: A Case Report and Review of Literature. *International Journal of Hematology-Oncology and Stem Cell Research*. 12. 8-13.

## CONTACT

Corresponding/presenting author: Pedro Oliveira Monteiro; Contact information for correspondence: Mobile +351912986798; e-mail: pd.oliveiramonteiro@gmail.com