Unique pattern of intracranial relapse of Multiple Myeloma (MM) after autologous stem cell transplantation (ASCT).

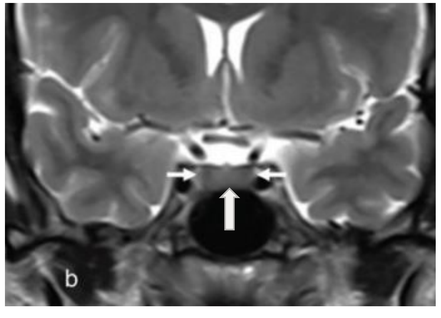
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Abstract

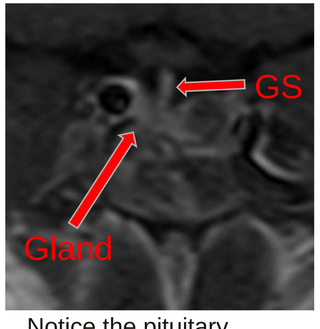
MM is a clonal plasma cell disorder that rarely involves the central nervous system (CNS). MM often affects the skull vault, but involvement of the sella turcica and brain parenchyma are extremely rare. We describe this atypical intracranial presentation in four MM patients each following an ASCT.

Background

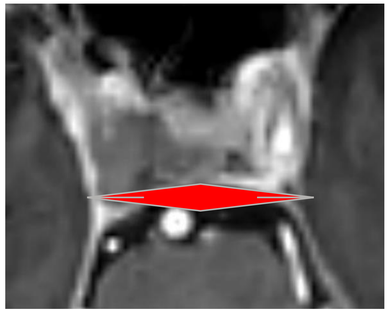
Subject races were White (n=1) and Black (n=2). Mean age was 56 years. Two had revised international staging system (R-ISS) stage II disease, and one had stage III disease. Post ASCT all received lenalidomide maintenance. The time to CNS relapse in patients with R-ISS stage II disease were 36 and 22 months. It was 9 months in the stage III disease patient. Typically, the relapse was around the sellar region, involving the cavernous sinus, clivus, sphenoid bone, optic chiasm, and pituitary gland. Two patients had evidence of third and sixth cranial nerve palsy. All patients had bone marrow and extracranial bony relapse of MM. Two patients underwent transsphenoidal resection of a pituitary mass. Patients with R-ISS stage II and stage III disease died 48 and 11 months after CNS relapse, while one remain on salvage therapy.



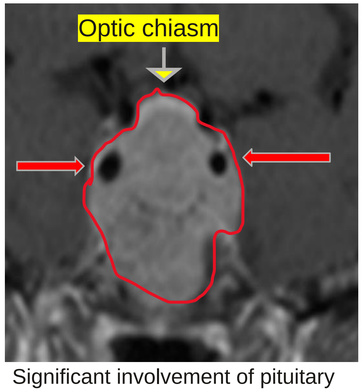
In the coronal view of a normal pituitary gland the white arrows indicate the width of the gland. (1).



Notice the pituitary gland compressed and markedly displaced to the left. GS: Gland stalk.



Significant asymmetric involvement of the pituitary gland by MM along its width.



Significant involvement of pituitary gland by MM with mass effect on pituitary stock and inferior margin of optic chiasm. Bilateral abducens nerves palsy (R > than L).
Red arrows=carotid arteries.

Conclusions

CNS MM is a rare event associated with a poor prognosis. ASCT alters the natural course of MM, and disease relapses can occur in specific sanctuary sites. CNS involvement from MM should be considered in patients presenting with neurological symptoms following an ASCT. Timely recognition can avoid unnecessary surgical intervention.

References

Yada P., Singhal S., Chauhan S.,Harit S. MRI evaluation of size and shape of normal pituitary gland: Age and sex related changes. Journal of Clinical and Diagnostic Research. 2017 Dec, Vol-11(12): TC01-TC04