CASE REPORT

INTRA-OSSEOUS MENINGIOMA OF SKULL AND TRAUMA

Muhammad Khalid, Khaleequz Zaman, Samina Khaleeq, Muhammad Tahir*, Muhammad Assad Javed

Department of Neurosurgery, Pakistan Institute of Medical Sciences, *Department of Pathology, Federal Government Polyclinic Hospital, Islamabad-Pakistan

We report a case of intra-osseous meningioma of the skull in a 45 year old lady secondary to trauma, preoperatively suspecting it to be chronic osteomylitis. According to literature search only one case intra-osseous meningioma has been reported. Intra-osseous meningioma secondary to trauma has not been reported before.

Keywords: Intra-osseous meningioma, trauma

J Ayub Med Coll Abbottabad 2015;27(3):717–8

INTRODUCTION

Intracranial Meningiomas have been reported which have be related to trauma.[1,2] Only one case of intra-osseous meningioma has been reported. After extensive literature search the authors could not find a single report associated trauma with intra-osseous meningioma. The authors report a case of intra-osseous meningioma of skull associated with trauma.

A 45 years old lady presented in PIMS hospital on 28 October 2014 with one year history of progressively enlarging right fronto-parietal swelling and Progressive headache. Patient had history of trauma at site of swelling 3 years prior to present. She was hit by a stone and her scalp was dealt with locally with stitch and a dressing above but according to the patient it was discharging pus up to 4 to 6 weeks. Local examination revealed a non-tender bony hard oval swelling with an overlying scar adherent to it no radiological investigation was done at that time. We admitted her for scrapping the lesion suspecting granulation tissue during surgery and after receiving the histology meningioma was confirmed. Radiological workup was done prior to scrapping and we admitted her for scrapping but we changed our decision and excision was done.

Plain skull X-ray revealed a solitary well-define lytic area in intra-osseous right fronto-parietal region.

CT scan brain revealed a well define area of osteolysis in the right fronto parietal region, expending the calvaria (Figure-1).

The outer table had hyperostosis while the inner table was thinned out as clear from the bone windows of CT scan (Figure-2).

The mass lesion showed prominent enhancement with centre non-enhancing contrast it was suspected be chronic osteomylitis. There was no discharge or sinus.

The patient was operated. The mass along with the hyperostosed outer table and thinned out inner table was cleaned. The dura was not involved and hence not excised.

Histopathologically report showed scattered fragments of bony trabeculea with intervening clusters of cells with indistinct cell boundaries' and occasional nuclear clearing and psudoinclusions at places. No Mitotic figures are seen. (Figure-3)

S-100 protein week positive (Figure-5) and CD 34 negative and hence meningioma WHO grade 1 was confirmed.

DISCUSSION

Intra-osseousmeningiomas are extremely rare; there is only one case report by Crawford TS.[1] and intra-osseous meningiomas with trauma are almost non-existent. They are usually slow growing tumours commonly found supra and infra tentorium, The aetiology of meningiomas is unclear but some are associated with genetic aberration such as partial loss of chromosome 22, prior trauma and radiation therapy and presence of chronic inflammatory process in the meninges has been reported to be directly related to the development of Meningiomas.[2,3] These kinds of meningiomas of skull are considered as a different entity from intracranial meningiomas.[4,5]

CT scan brain showed bony meningioma which is large in size later consider for cranioplasty. Neurological patient was normal over following weeks.

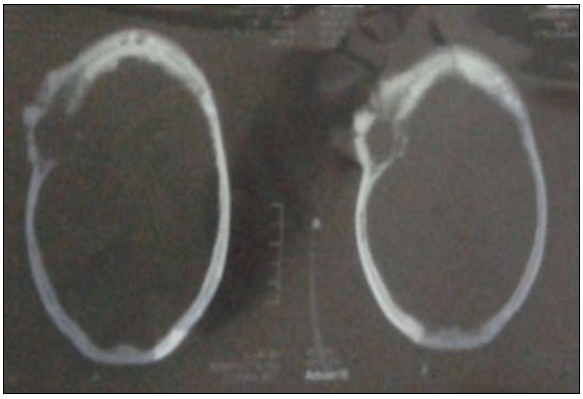

Figure-1: CT-scan brain with bone window

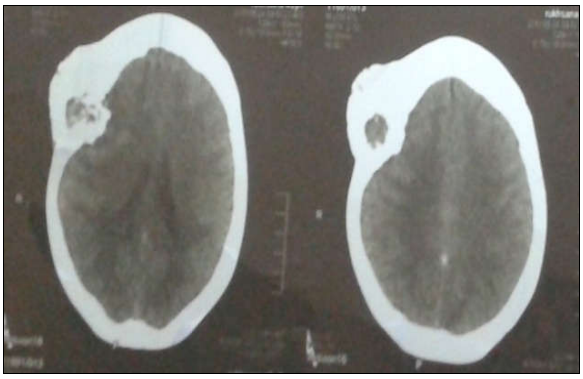

Figure-1: CT-scan brain with contrast

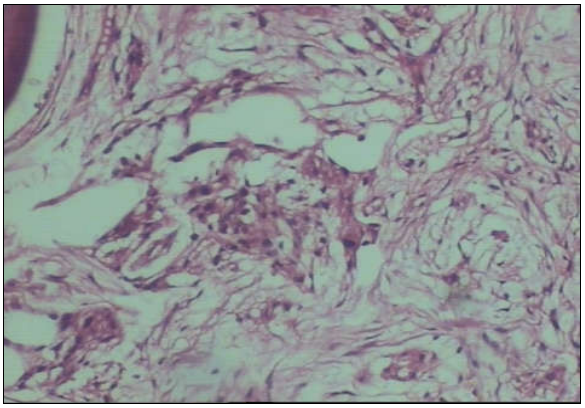

Figure-3: Immunohistochemical staining showed EMA positive

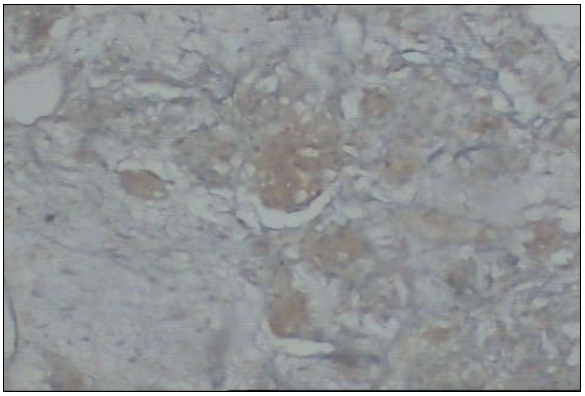

Figure-4: EMA positive

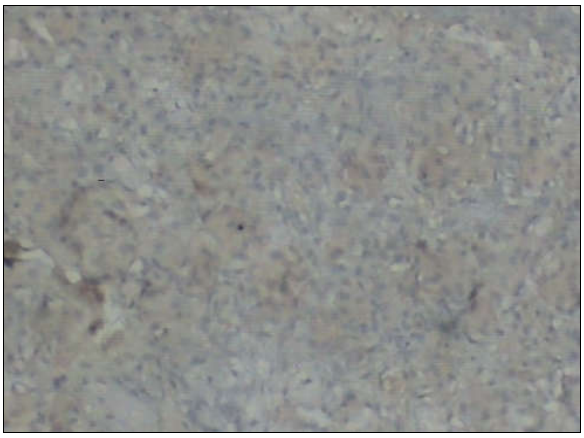

Figure-5: S-100 Protein Positive

CONCLUSION

The Intra-osseous meningioma is well recognized entity but its association with trauma has never been reported. The coincidence of which can mislead the treating surgeon preoperatively as in our case.

AUTHOR'S CONTRIBUTIONS

MK: write-up of manuscript, KZ, SK: operating surgeons, proof-read the manuscript, MT, MAJ: tem members in patient management and write-up of manuscript

REFERENCES

1. Crawford TS, Kleinschmidt-Demasters BK, Lillehei KO. Primary intra-osseous meningioma: case report. J Neurosurg 1995;83(5):912–5.
2. Barnett GH, Chou SM, Bay JW. Posttraumatic intracranial meningioma: A case report and review of the literature. Neurosurgery 1986;18(1):75–8.
3. Lang FF, Macdonald OK, Fuller GN, DeMonte F. Primary extradural meningiomas: a report on nine cases and review of literature from the era of computerized tomography scanning. J Neurosurg 2000;93(6):940–50.
4. Lious DN, scheithauer BW, Budka H. Meningiomas.In: Kleihues P, Cavenee WK, eds. Pathology and genetic of tumours of the nervous system. Lyon, France: IARC press; 2000. p.176–84.
5. Muzumdar DP, Vengsarkar US, Bhatjiwale MG, Goel A. Diffuse calvarial meningioma: a case report. J Postgrad Med 2001;47(2):116–8.

Address for Correspondence:

Muhammad Khalid, Department of Neurosurgery, Pakistan Institute of Medical Sciences (PIMS) Islamabad-Pakistan
Cell: +92 334 515 6597
Email: drkhalid86@yahoo.com