CLIVUS METASTASIS PRESENTING AS ISOLATED ABDUCENT NERVE PALSY – CASE REPORT

M.M. Chandrashekhar[1], Kunal Kishore[2], V. Lakshmaiah[3], Nagesha. C.K.[4], B.N. Kishore Kumar[5]

HOW TO CITE THIS ARTICLE:
MM Chandrashekhar, Kunal Kishore, V Lakshmaiah, Nagesha. C.K.4, BN Kishore Kumar. "Clivus metastasis presenting as isolated abducent nerve palsy – case report – a case report". Journal of Evolution of Medical and Dental Sciences 2013; Vol. 2, Issue 43, October 28; Page: 8383-8385.

ABSTRACT: A 50 year old lady with past history of breast carcinoma surgery presented with progressive diplopia of 15 days duration. Examination revealed paresis of right abducens nerve. Though risk factor like Hypertension was present, patient was ordered MRI which showed Clivus and vertebral metastatic foci highly suggestive of metastasis from breast carcinoma. The patient was referred for radiation therapy. Hence, meticulous neuroophthalmic examination and management is necessary to rule out localised metastasis causing isolated abducens nerve palsy.
KEYWORDS: Abducens nerve, Clivus, Breast carcinoma, Diplopia, Metastasis.

CASE SUMMARY: A 50 year old female presented with sudden onset double vision of 15 days duration. Two years back she had been diagnosed with stage-3 ductal carcinoma of breast and got operated for the same. The double vision was progressive and more so when she attempts to look towards right side. Her visual acuity was normal, slit lamp examination and fundus findings were within normal limits. Hirschberg test revealed esodeviation of right eye around 30^0 (Fig1). Diplopia charting showed crossed diplopia and Hess screening confirmed the diagnosis of Right lateral rectus paresis.

Though the patient had vasculopathic risk factors like Hypertension (150/100mmHg), MRI brain was ordered to identify the cause. The MRI scan showed altered signal intensities in Clivus, Atlas and Axis showing hypointense on T1 images with compression fracture in body of Axis vertebrae suggestive of metastasis (Fig2). On neurologic consultation, metastasis from breast carcinoma was highly suspected. She was then referred to radiation oncology service for whole brain radiation therapy.

DISCUSSION: Most isolated abducens nerve palsy in patients over 50yrs of age is ischemic in nature. However, there are other causes that can mimic abducens nerve palsy which require aggressive diagnosis and management. Neoplasm is known to be one of the causes of abducens nerve palsy. It can be due to a tumor insitu[1] or by distant metastasis[2]. Metastasis from carcinoma of prostate[3], Kidney[4], Colon[5], Tonsil[6], Liver[7] and Lungs[8] have been reported in literature which caused myrid of lesions like isolated and multiple cranial nerve palsies.

Reyes KB et al[9] reported abducens nerve palsy secondary to isolated brainstem metastasis from a breast cancer. MRI in that case showed a pontine mass lesion causing palsy of 6^{th} nerve. A similar case was reported by Sans Beom Han[10] where a metastatic mass in the facial colliculus of lower pons involving abducens nucleus resulting in Gaze palsy.

In our case, MRI which was done 1month back before the onset of diplopia was normal. But the strong suspicion made us to repeat MRI which showed localised metastaic lesions. Though microvascular ischemia due to hypertension could be cause the for 6^{th} nerve palsy in our case,

location of metastatic lesions on MRI and proximity of abducens nerve favoured diagnosis of nerve palsy of tumor origin.

Neoplasm is known to be one of the cause of isolated Abducens nerve palsy. Hwever, to best of our knowledge, this is the first case of 'isolated 6th nerve palsy of metastatic origin' reporting from India. Thorough history-taking and neuro-ophthalmic evaluation would help physcian establishing differentials, which could not only be sight-saving but life-saving as well.

TO CONCLUDE: A localized metastasis to abducens nerve can occur causing diplopia in patient with history of breast cancer.

REFERENCES:

1. Clinical course of abducens nerve palsy associated with skull base tumours. Shono T, Mizoguchi M, Yoshimoto K, Amano T, Natori Y, Sasaki T.Acta Neurochir (Wien). 2009 Jul;151(7):733-8.
2. Cranial nerve deficit caused by skull metastasis of prostate cancer: three Japanese castration-resistant prostate cancer cases. Izumi K, Mizokami A, Narimoto K, Sugimoto K, Koh E, Kumano T. Int J Clin Oncol. 2010 Dec;15(6):631-4.
3. Prostate cancer metastasis to clivus causing cranial nerve VI palsy. Malloy KA. Optometry. 2007 Feb;78(2):55-62.
4. [Skull base metastasis from renal cell carcinoma presenting as abducens nerve paresis: report of two cases]. Sagoh M, Kodaki K, Ichikizaki K, Murakami K, Oizumi T, Kawase TNo Shinkei Geka. 1996 Sep;24(9):829-33.
5. Sixth nerve palsy as the presenting symptom of metastatic colon carcinoma. Kinori M, Ben Bassat I, Huna-Baron R. nt Ophthalmol. 2011 Feb;31(1):69-72.
6. Abducent nerve paralysis: first clinical sign of clivus metastasis from tonsillar carcinoma. Marchese-Ragona R, Maria Ferraro S, Marioni G, Staffieri C, Manara R, Restivo DA. Acta Otolaryngol. 2008 Jun;128(6):713-6.
7. Hepatocellular carcinoma metastasizing to the skull base involving multiple cranial nerves. Kim SR, Kanda F, Kobessho H, Sugimoto K, Matsuoka T, Kudo MWorld J Gastroenterol. 2006 Nov 7;12(41):6727-9.
8. Isolated bilateral sixth nerve palsy secondary to metastatic carcinoma: a case report with a review of the literature. Kocak Z, Celik Y, Uzal MC, Uygun K, Kaya M, Albayram S. Clin Neurol Neurosurg. 2003 Dec;106(1):51-4.
9. Abducens (sixth) nerve palsy presenting as a rare case of isolated brainstem metastasis from a primary breast carcinoma. Reyes KB, Lee HY, Ng I, Goh KY. Singapore Med J. 2011 Nov;52(11):e220-2.
10. Presumed Metastasis of Breast Cancer to the Abducens Nucleus Presenting as Gaze Palsy. Sang Beom Han, Jae Hyoung Kim, Jeong-Min Hwang. Korean J Ophthalmol 2010;24(3):186-188.

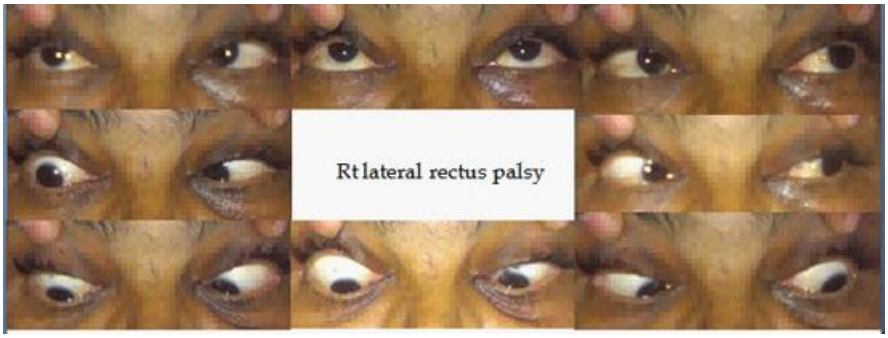

Fig-1

Fig-2

AUTHORS:

1. M.M. Chandrashekhar
2. Kunal Kishore
3. V. Lakshmaiah
4. Nagesha. C. K.
5. B.N. Kishore Kumar

PARTICULARS OF CONTRIBUTORS:

1. Associate Professor, Department of Neurology, Sri Devaraj Urs Medical College, and Research Centre.
2. Post Graduate Student, Department of Ophthalmology, Sri Devaraj Urs Medical College, and Research Centre.
3. Professor, Department of General Medicine, Sri Devaraj Urs Medical College, and Research Centre.
4. Assistant Professor, Department of Ophthalmology, Sri Devaraj Urs Medical College, and Research Centre.
5. Professor, Department of Radiology, Sri Devaraj Urs Medical College, and Research Centre.

NAME ADDRESS EMAIL ID OF THE CORRESPONDING AUTHOR:

Dr. M.M. Chandrashekhar
Associate Professor
Dept. of Neurology.
Sri Devaraj Urs medical college
and research center.
Email – Chandru1553@yahoo.com

Date of Submission: 15/10/2013.
Date of Peer Review: 16/10/2013.
Date of Acceptance: 23/10/2013.
Date of Publishing: 26/10/2013