INTERESTING CASE OF MIGRAINE
GOVINDA MURUGAN
Department of General Medicine,
THANJAVUR MEDICAL COLLEGE

Abstract: 14 yr old female, a known migraine patient, admitted for severe headache with aura and ptosis on left eye with double vision on looking upwards, on examination, her visual acuity was diminished in left eye, subsequently on 9th day of admission, patient developed restricted movement on elevation in left eye. On 33rd day elevation, depression and adduction was restricted with dilated pupil in left eye. On day 44th, her eye movements improved on treatment with steroids. As defined by International Headache Society, patient with recurrent headache of migrainous characteristics with transient paralysis of ocular nerve (3rd nerve in our patient), with dilated pupil and normal CSF analysis, on follow up showing resolution of symptoms, CT showing bilateral occipital infarct, MRI showing FLAIR images of hyperintense lesion in both occipital areas, MR angiogram showing bilateral posterior cerebral artery vasospasm, with persistent diminished visual acuity in left eye. Our patient fits into diagnosis of migraine with aura, complicated by migrainous infarction and ophthalmoplegic migraine. In literature this complication is stated as rare entity, we present this rare case of complicated migraine with both migrainous infarction and ophthalmoplegic migraine.

Keyword: Migraine, Migraine with aura, migrainous infarction, ophthalmoplegic migraine

Case history:
14 year old girl, a known migraine patient diagnosed at 11 years of age on treatment, got admitted with complaints of intense headache for past 6 months, which was insidious in onset, episodic in nature, lasting for 12-24 hours, more in left temporal region, aggravated by sunlight and work, relieved by rest, associated with nausea and vomiting, preceded by features of visual aura in the form of scintillating flashes of light. She had history of drooping of left eyelid for 5 days, which was insidious in onset without any diurnal variation. She had history of double vision on looking upwards. There is no other significant history. There was no family history of migraine.

On examination, she was oriented, afebrile with stable vitals. Her higher mental function was normal. Optic nerve examination revealed reduced visual acuity on left eye with normal field of vision and fundus was normal on both eyes. Eye movement was normal at the time of admission but with partial ptosis on left eye. The pupil size and pupillary reflex were normal on both eyes. Other cranial nerves examination are normal. Her spinomotor system examination was normal. Sensory system examination was intact. There was no cerebellar or meningeal signs. Her spine and cranium were also normal.
as defined by international headache society as recurrent headache "opthalmoplegic migraine "

Guler in 1860 first describe it, Charcot in 1890 named it as OPHTHALMOPLEGIC MIGRAINE

DISCUSSION

OPHTHALMOPLEGIC MIGRAINE

Guler in 1860 first describe it, Charcot in 1890 named it as "opthalmoplegic migraine " as defined by international headache society as recurrent headache with migrainous characteristics associated with paralysis of one or more oculor nerves.

Incidence _ 0.7 per 10 lakh population, age of onset- first decade. Male predominance or occurs equally in both sexes,family history being rare.

CLINICAL CRITERIA being

1. childhood onset
2. Headache preceding and ipsilateral to ocular nerve palsies
3. Dilated pupil
4. ophtalmoplegia – that may be permanent and rarely accompanied by aberrant occulomotor regeneration
5. A minimum of 2 episodes
6. No evidence of structural lesion

PATTERN OF PRESENTATION being

1. Follows remarkable constant pattern
2. Pain and headache is the initial symptom
3. pain can be localised or not clearly defined
4. unilateral at first then become localised.
5. 3rd nerve commonly affected
6. Plosis begins at the time of pain, followed by diplopia-which ceases when the ptosis becomes complete
7. Pupils almost always affected , many cases mildly dilated and reacts sluggish to light
8. Cranial nerve palsy takes 10-18 days to resolve completely, recovery seen as ptosis get improving, ocular motil-ity and papillary constriction improves
9. Behaviour of the subsequent attacks makes diagnosis possible, after complete symptom free interval of months to 2 yrs, another identical attack occur .
10. Gradually , as child gets older, get replaced by more familiar variants, trochlear and abducent are affected less often, occasionally accompanied by other cranial nerve involvement

PATHOGENESIS is unclear, suggests a lesion in the peripheral portion of III nerve . Current theory being RECURRENT DEMYELINATING CRANIAL NEUROPATHY AS ISCHAEMIC THEORY:

reduction in blood flow through ICA during migraine attack, perhaps through PCA or basilar artery , producing ischaemic paresis. Other less accepted theory being compressive theory, swelling of PCA,unilateral brain swelling MRI showing thickening and contrast enhancement of the nerve as it exits the midbrain, which may persists after III nerve palsy had disappeared (daroff 2002).

Prognosis is favourable for recovery unless attacks occur very often if MRI shows enhancement of cisternal portion of the occulomotor nerve and lumbar puncture is negative , a presumptive diagnosis is made, but follow up is necessary to be sure the symptoms resolve TREATMENT is routine migraine prophylaxis, steroid showing mixed results.

MIGRAINOUS INFARCTION

As described by international headache society classification as fulfilling the below three criterias

1. Patient had previously fulfilled criteria for migraine with neurological aura.
2. Present attack is typical of previous attacks, but neurological deficits are not completely reversible within 7 days and/or neuroimaging demonstrates ischaemic infarction in the relevant area.
3. Other causes of infarction have been ruled out by appropriate investigation.

The overall incidence of migrainous infarction has been estimated to be 3.36 per 1 lakh population per year. In absence of other stroke risk factors, incidence becomes 1.44 per 1 lakh population per year. Affects women more often than men, may start during childhood or adolescence. Headache with stroke is not sufficient to make diagnosis of migraine as a cause, migrainous infarction remains diagnosis of exclusion.

The usual scenario of migrainous infarction is one of recurrent episodes of gradual build up of unilateral throbbing headache, associated with stereotyped visual phenomena occurring in both visual fields simultaneously, in one of which the visual loss becomes permanent. Migrainous infarction is subdivided as definite- when all three criteria are fulfilled, possible- when some but not all criteria are fulfilled, they are at increased risk of recurrent stroke
Infarction is thought to be due to prolonged vasospasm associated with migraine. Intense vasospasm can impede the flow, thereby promoting thrombosis. Platelets are activated during migraine and the vasoconstrictive process may stimulate the endothelium to release factors that promote thrombosis. Severe vasoconstriction and thrombi have been demonstrated in patients with migraine who have PCA or basilar territory infarcts. It may be due to platelet aggregation, edema of the arterial wall, increased coagulability, dehydration from vomiting. Rare cases of reversible vasospasm is also reported after the use of ergotamine or serotonin agonist drug in excessive dosage.

Treatment being routine migraine prophylaxis and use of antithrombotics is also useful.

REFERENCES
1. MERRIT’S NEUROLOGY – 12TH EDITION, CHAPTER 135 PRIMARY AND SECONDARY HEADACHE P.952
2. NEUROLOGY IN CLINICAL PRACTICE – WALTER. G. BRADLEY , ROBERT B.DUROFF – 5 TH EDITION , 2ND VOLUME ,CHAPTER 73 HEADACHE AND OTHER CRANIOFACIAL PAIN P.2029
3. ADAM & VICTOR’S PRINCIPLES OF NEUROLOGY – 9TH EDITION, CHAPTER 10 HEADACHE AND OTHER CRANIOFACIAL PAINS P.169
4. CHRISTOPHER . G. GOETZ , TEXT BOOK OF CLINICAL NEUROLOGY – 3RD EDITION , HEAD ACHE AND FACIAL PAIN P.1261
5. WALSH & HOYT’S CLINICAL NEURO-OPTHALMOLOGY – 6TH EDITION , VOLUME 1, P. 1307-1308
6. ALBERT & JAKOBIEC , PRINCIPLES & PRACTICE OF OPTHALMOLOGY – 2ND EDITION , VOLUME 5 , CHAPTER 304 MIGRAINE P.4297-4298.