



12<sup>th</sup> International Congress and Scientific Seminar

*Meet the Experts*

# A YOUNG PATIENT WITH STROKE

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# CASE PRESENTATION

- ◎ 12 year old student admitted with the complaints of :
  - Sudden loss of speech for 4 days
  - Weakness of right side of body for 4 days
  - One episode of generalized convulsion with vomiting

# HISTORY:

- ⦿ Problem associated with
  - Headache, unilateral episodic, for last 2-3 months
  - Vomiting, one episode during convulsion
- ⦿ Right handed
- ⦿ Normotensive non-diabetic

# HISTORY:

- ⦿ Problem not associated with
  - Vertigo
  - Blurring of vision
  - Sensory disturbance
  - Urinary or stool incontinence
  - Palpitation
  - Chest pain
- ⦿ No history of head trauma, meningitis or epilepsy, travelling to malaria affected zone or contact with TB patient.
- ⦿ He had no rashes, joint pain or swelling.

# HISTORY:

## H/O Past Illness:

No DM  
No HTN  
No previous IHD - CVA  
No Hyperlipidemia

## Family History:

First issue of parents. Healthy younger sister, 9 years of age. No consanguinity. No such prior history in any members of the family.

## Personal History:

Non smoker  
Non Alcohol consumer

# HISTORY

- ⦿ Immunization History:

as per EPI schedule

- ⦿ Socio -economic History:

Lower middle class family

# EXAMINATION

- ⊙ BP: 120/80 mmHg                      PULSE: 84b/min
- ⊙ TEMP: NORMAL
- ⊙ Obese ( BMI 31)
- ⊙ HEART: All Pulses felt. No carotid Bruit.  
 $S_1 + S_2 + 0$
- ⊙ LUNGS: Vesicular breath sound. No added sound
- ⊙ ABDOMEN: Soft. No organomegaly. Bowel sound present. No renal bruit or venous hum present.

# NERVOUS SYSTEM EXAMINATION

- ⊙ GCS: E<sub>4</sub>V<sub>3</sub>M<sub>1</sub>
- ⊙ Conscious
- ⊙ Higher psychic function intact
- ⊙ Motor Aphasia
- ⊙ UMNL of right VII nerve
- ⊙ Right sided hemiparesis
- ⊙ Coordination and sensory pathways intact.
- ⊙ Fundoscopy normal
- ⊙ No neck rigidity or meningeal irritation
- ⊙ No nystgmus

# EXAMINATION CONTD.

REFLEXES	BICEPS	TRICEPS	KNEE	ANKLE	PLANTAR
RIGHT					Extensor
LEFT	Normal	Normal	Normal	Normal	Flexor

MUCLE POWER	RIGHT	LEFT
UPPER LIMB	1/5	5/5
LOWER LIMB	1/5	5/5

# SALIENT FEATURES

- A 12 year old right handed boy was admitted to DMCH through ER with the complaints of right sided weakness of the body and inability to speak for 4 days, seizure associated with vomiting for one episode. He has been having episodic headache for last 2-3 months. His bowel and bladder habit was normal. He had no H/O fever, head trauma, travel to a Malaria affected zone or contact with a TB patient. He did not have any significant history of past illness. Elder of two siblings, he comes from a lower middle class family . He has been vaccinated as per EPI schedule.

# SALIENT FEATURE

His general examination and all systemic examinations except the nervous system revealed no abnormality.

Examination of his nervous system revealed that he was conscious, but aphasic ( motor aphasia) . His higher psychic functions were intact. He had UMNL of right VII cranial nerve resulting in loss of nasolabial furrow and deviation of angle of mouth to opposite side. All reflexes in right side of his body were exaggerated with increased tone and decreased muscle power (1/5). Gait could not be assessed. He had no sign of meningeal irritation, no cerebellar signs. Coordination and sensory pathways were normal.

# PROVISIONAL DIAGNOSIS

- ⦿ Cerebrovascular Disease
- ⦿ Intra Cranial Space Occupying lesion
  - Lymphoma
  - Tuberculoma

# INVESTIGATIONS

- ◎ Complete Blood Count
  - Hb: 15.1 g/dL
  - WBC : 12780/ cumm (N:69.2%,L: 23.6%)
  - Platelet : 492000/ cumm
- ◎ Bt & CT : Normal
- ◎ PBF:
  - RBC: Normocytic normo chromic
  - WBC: Mature with above count and distribution
  - Platelet: Normal

# INVESTIGATION: BIOCHEMISTRY

- ⦿ RBS: 7.05 mmol/L
- ⦿ CUS: NIL
- ⦿ S. Creatinine: 0.93 mg/dl
- ⦿ Na<sup>+</sup> : 145.0 mmol/L
- ⦿ K<sup>+</sup> : 5.2 mmol/L

# INVESTIGATION: BIOCHEMISTRY

- Lipid profile :

- S. Cholesterol : 196 mg/dl
- HDL : 35 mg/dl
- LDL : 105 mg/dl
- Triglyceride : 277 mg/dl( ↑ )

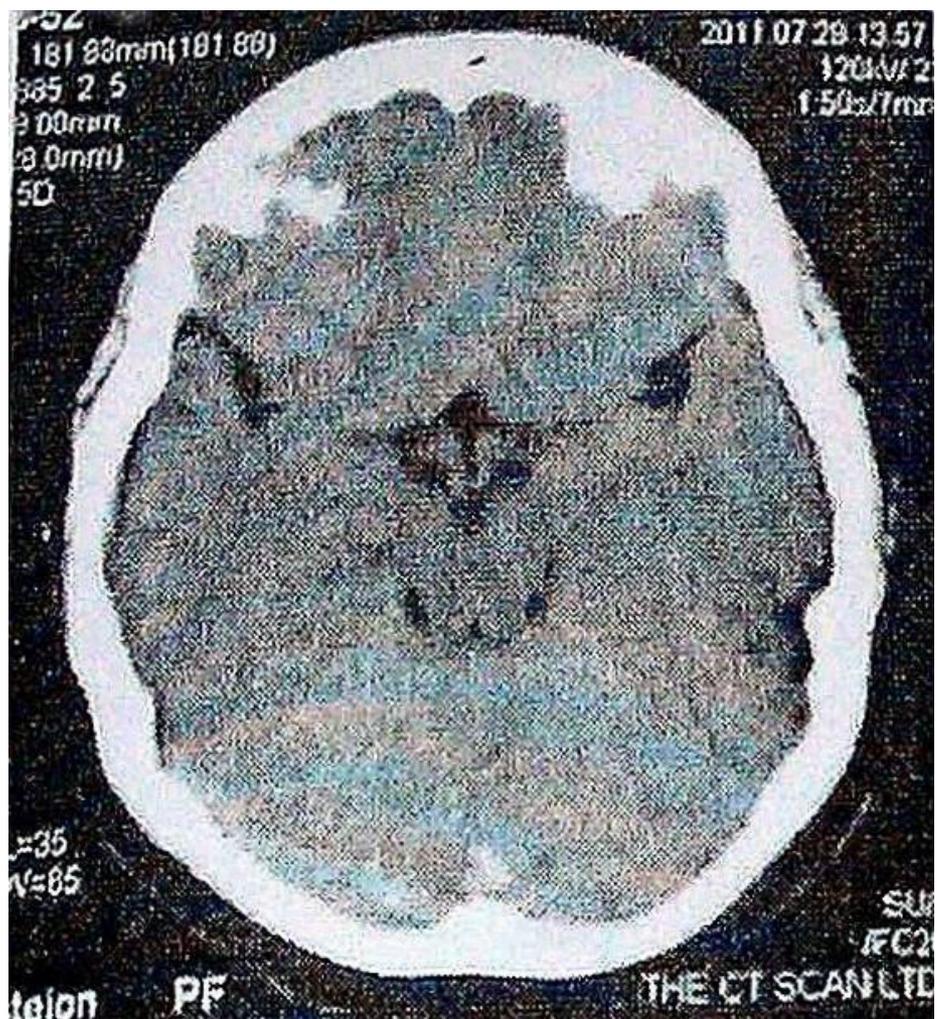
- Urine R/E: Normal

# INVESTIGATION

- ⦿ ECG: Normal
- ⦿ CXR : Normal
  
- ⦿ Echocardiography (Trans-esophageal):
  - A small patent Foramen Ovale is present with Left to Right shunt.
  - No vegetation or thrombus found.

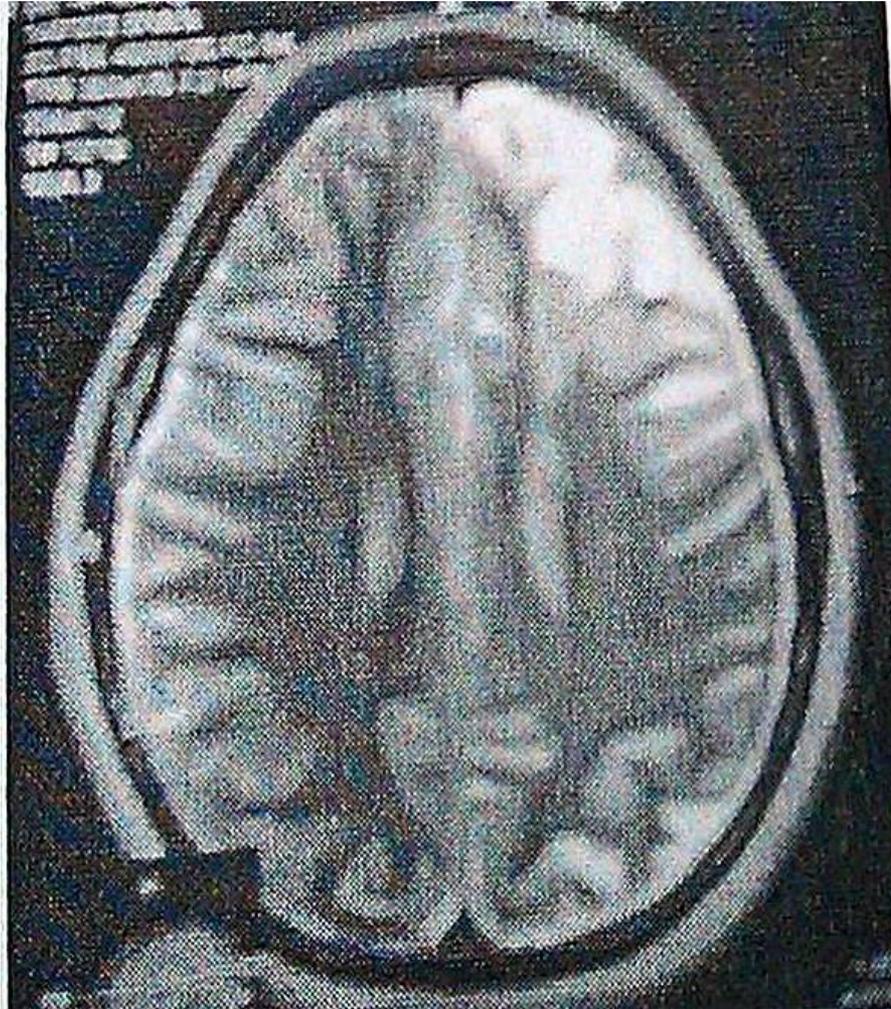
# CT BRAIN

- ⦿ Acute moderately large left Fronto-parietal infarct
- ⦿ Chronic small left Parietal infarct
- ⦿ No evidence of intracerebral hemorrhage.



# MRI BRAIN

- ⦿ MRI features suggestive of Fibrolamellar cortical necrosis of left Fronto-parietal region.
- ⦿ D/D: Gliomatosis Cerebri



# IMMUNOLOGY SCREENING

ANA : Negative

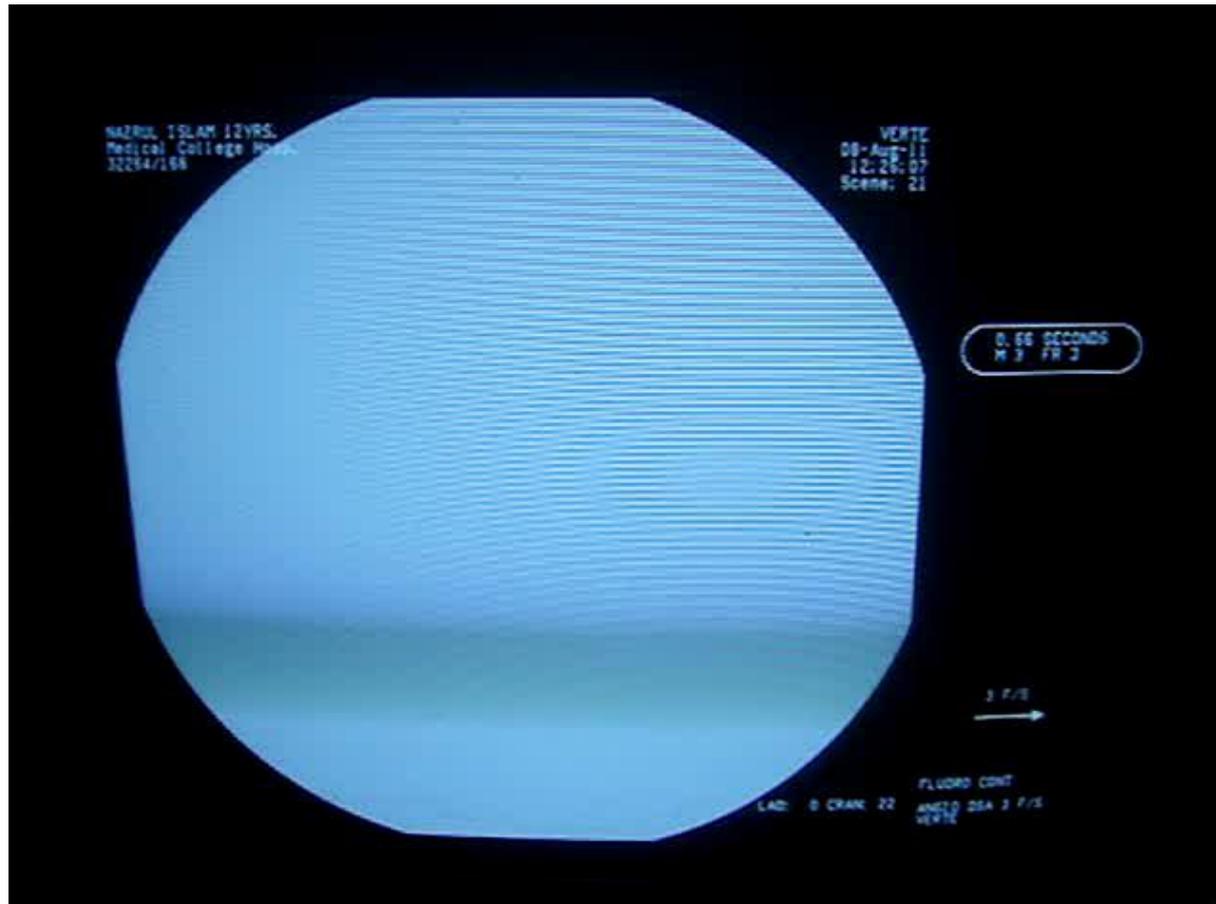
HBs Ag : Negative

VDRL/RPR : Negative

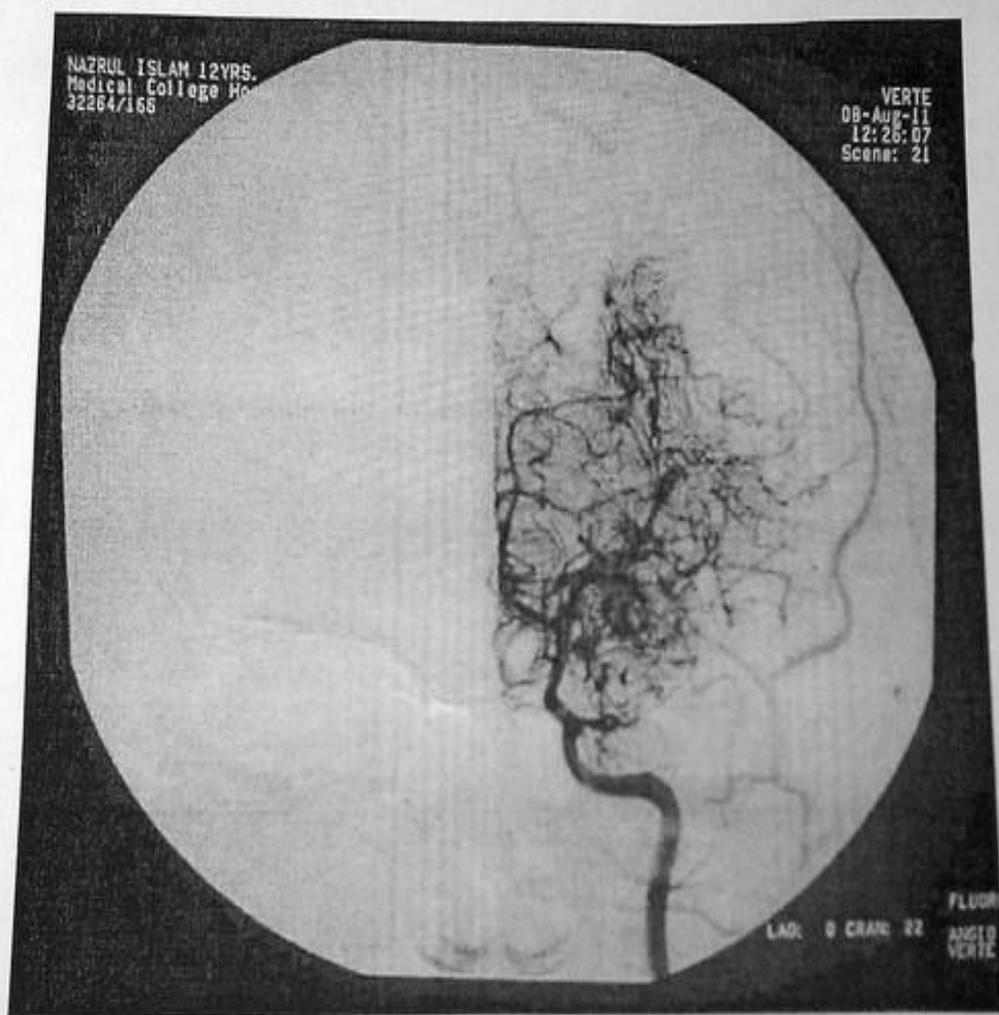
Anti HCV : Negative

HIV (1+2) : negative

# VIDEO OF DSA SHOWING TYPICAL MOYAMOYA VESSELS



# DIGITAL SUBTRACTION ANGIOGRAM



LICA angiogram AP view reveals discontinuation of Lt ICA at supraclinoid level with multiple Dural & Meningeal vessels supplying the Lt. MCA & Lt ACA territory giving rise the typical smoky angiographic appearance.

# DSA: REPORT

RICA angiogram reveals normal carotid bifurcation with small blushes around pericallosal artery.

LICA Angiogram reveals *discontinuation of left ICA at supraclenoid level . There were multiple dural and meningeal vessels supplying the left MCA and left ACA territory giving rise to the typical angiographic appearance of Moyamoya Disease.*

## DIAGNOSIS:

Moyamoya disease

Hypertryglyceridaemia

Patent Foramen Ovale (small)

**THANK YOU**