# A 16-year-old young girl with convulsion and behaviour abnormality

PRESENTED BY
DR. CHOWDHURY TAMANNA TABASSUM
HONOURARY MEDICAL OFFICER
DMCH

# Particulars of the patient

- Name: Shantona Aktar
- Age: 16 years
- Sex: Female
- Marital Status: Unmarried
- Occupation:Madrasa Student
- Religion: Islam
- Address: Comilla
- Date of admission: 01/10/2017

# Case Summery

- Shantona Aktar ,16 year-old-young girl, Muslim ,student , hailing from comilla, referred to DMCH on 01-10-17 with-

**1. Repeated fall and convulsion for last 18 months.**

**2. Behaviour abnormality for 1 year.**

**3. Mutism for 6 months.**

# Case Summery (Continued…)

- According to the statement of the patient's mother she was enjoying good health until about 18 months back **when she suffered a sudden fall while walking, followed by convulsion**, which was **generalized** in nature. At that time it was not associated with any loss of consciousness, tongue bite ,urinary incontinence or post ictal confusion. She visited a local physician and received some medication ( Couldn't mention the name) and her next 6 months were uneventful.

# Case Summery (Continued…)

- Then after 6 months ,she again experienced another episode of **convulsion associated with tongue bite and post ictal confusion**. This time EEG was performed, **epileptiform discharge was present in both hemisphere** and some medications were prescribed by a local physician . After this event,her family members noticed some **behavioural abnormality** manifested by unusual quietness , decreased interaction with others, occasional emotional lability evidenced by crying or smiling without any reason. She visited many physicians and kabiraz (Traditional healer) for these symptoms without any improvement.

# Case Summery (Continued…)

- Now, for last 3 months she suffered **frequent convulsion** sometimes **associated with fall** when in standing position and **worsening of behavioural pattern.** She gradually stopped speaking completely and wouldn't even ask for food. She stopped taking care of herself and have to be forcefully bathed. She had to left her education for this reason and got admitted in a local hospital in comilla where many investigations were done **including MRI without any conclusive diagnosis and they referred the patient to DMCH** for better management .

# Case Summery (Continued…)

- There was no history of fever , headache, loss of consciousness, limb weakness , photophobia ,tingling sensation, numbness, difficulty in swallowing ,rash , oral ulcer , joint pain, cough or respiratory distress, vomiting or diarrhoea.
- Her attendants denied any history of head trauma.
- She doesn't have any history of tuberculosis or contact with any known case of Pulmonary TB .

# Case Summery (Continued…)

- No history of Drug abuse or  sexual exposure.
- She is non-smoker and non-alcoholic .
- She is from lower middle class family, lives in a tin shade house, drinks tube well water and maintain good sanitation and hygiene.
- No intra or inter-country travel history

# Case Summery (Continued…)

- She is immunized as per EPI Schedule.
- Her past medical and surgical history was unremarkable. She is normotensive, non diabetic.
- She has one brother and one sister, all of them are in good health .
- She had no family history of epilepsy or this type of illness.
- She was a child of non-consanguinous marriage, and had normal birth history  and normal motor and mental development, with milestones at the expected age.

# General Examination

- Conscious
- Ill Looking
- Average Body Built
- Non- cooperative ( She was not following commands)

- Vital Signs:
  - Pulse- 82 b/ min (Regular)
  - BP - 110/70 mmhg
  - Respiratory Rate – 15 breaths/ min
  - Temp- 98.7 F

# General Examination

- Anemia - Mild
- Cyanosis – Absent
- Edema- Absent
- Dehydration- Absent

- Jaundice-Absent
- Spider naevi -Absent
- Clubbing - Absent
- Palmer Erythema- Absent

# General Examination

- Neck vein : Not engorged
- Thyroid gland : Not Enlarged
- Lymph Nodes : Not palpable

# Nervous System Examination

- Disorientation of  Time, Place, Person
- Speech-  Mute
- Memory- Couldn’t be evaluated

- Cranial Nerve Examination – Intact ( So far evaluated)
- Fundoscopy- Bilateral papilleodema
- Mini mental state examination- Couldn’t be evaluated

# Nervous System Examination

- Involuntary jerky movement of left side of face.
- Muscle Bulk- No wasting.
- Muscle  Tone- Normal
- Muscle Power- Normal
- Deep tendon reflexes of both upper and lower limb was Intact and Normal
- Plantar – Bilateral Extensor
- Gait - Normal

# Nervous System Examination

- Sensory system – Intact
- Cerebellar function – Normal
- Autonomic Function – Normal
- Signs of Meningeal Irritation- Absent

# Alimenatry Tract

- Tongue ,Lips ,Gum,Teeth- Normal

- **PER ABDOMEN :**
- Shape was Normal
- No Tenderness
- No Organomegaly

# Systemic Examination

- Examination of other system revealed no abnormality

# Problem List

- Repeated Convulsion
- Frequent Fall
- Behavioural Abnormality
- Bilateral Papilleodema
- Plantar Response- Bilateral Extensor
- Involuntary jerky movement of face

## CLINICAL DIAGNOSIS?

# Routine Investigations

# Complete Blood count

| Test | 25-08-17<br>( Before Admission) | 1-10-17( DMCH)<br>( After admission) |
|---|---|---|
| Hb (g/dl) | 11.48 | 11.70 |
| RBC (Million/cu mm) | 4.8 | 4.49 |
| WBC (per cubic mm) | 6500<br>N- 70%, L- 25% ,<br>M- 03% , E- 02 % , B- 00% | 10,000<br>N- 78%, L- 17% ,<br>M- 03% , E- 02 % , B- 00% |
| Platelet (per cubic mm) | 3,00000 | 3,50,000 |
| MCV (fl) | 78 | 76 |
| MCH (pg) | 31 | 33 |
| MCHC ( g/dl) | 78 | 79 |
| ESR | 12 | 07 |

# Investigations:

## Renal Function Test :

- Urine R/ E – Normal
- S. Electrolytes –Na: 140 mmol /L
  k: 3.5 mmol /L
  Cl: 105 mmol /L
- S. Creatinine – 0.61 mg/ dl ( Ref : 0.68-1.36 mg/dl)
- S. Urea – 17 mg/dl ( Ref: 15-40 mg/dl)

## Liver Function Test:

- S. Bilirubin- 0.4 mg/dl (Ref :0.18-0.94 mg/dl)
- SGPT - 24 U/L (Ref: 10-50 U/L)
- SGOT -40 U/L (Ref: 10-45 U/L)
- PT- 14sec ( Ref: 12-16 sec)
- S. Albumin – 3. 90 g/dl ( Ref: 3.5– 5.20 g/dl)

# Investigations

- Serum Calcium- 9 mg/dl (Ref: 8.5-10.5 mg/dl)
- Serum Magnesium – 2.0 mg/dl (Ref: 1.82-2.43 mg/dl)

**Thyroid Function test**

- TSH – 0.35 mIU/l (Ref:0.2-4.5 mU/L)
- Serum T3 -90 ng/dl (Ref: 75-200 ng/dl)
- Serum T4 – 6 ug/dl ( Ref: 4.6-12 ug/dl)

# Investigations

- ANA - Negative

# Investigations

- 24 Hour Urinary Copper- 25.6 ug/L (N : 20-50 ug/24 h)

- S. Ceruloplasmin- 250 mg/L (N :200-600 mg/L)

# EEG (08-10-16) ( Outside DMCH )

- Epileptiform discharge both spike α wave involving both hemisphere

# Radiological Investigation ( Outside DMCH)

- Chest Xray – Normal
- Ultrasonography of Whole Abdomen – Normal Study
- CT scan of Brain – Normal

# MRI of Brain 25/8/17

- Suggestive of cortical dysplasia involving both cerebral hemesphere as stated.
- Hypertrophied both inferior turbinate.

# Experts Suggestions

- What should be the next plan of investigation to reach the final diagnosis ?

# CSF study ( 03-10-17)

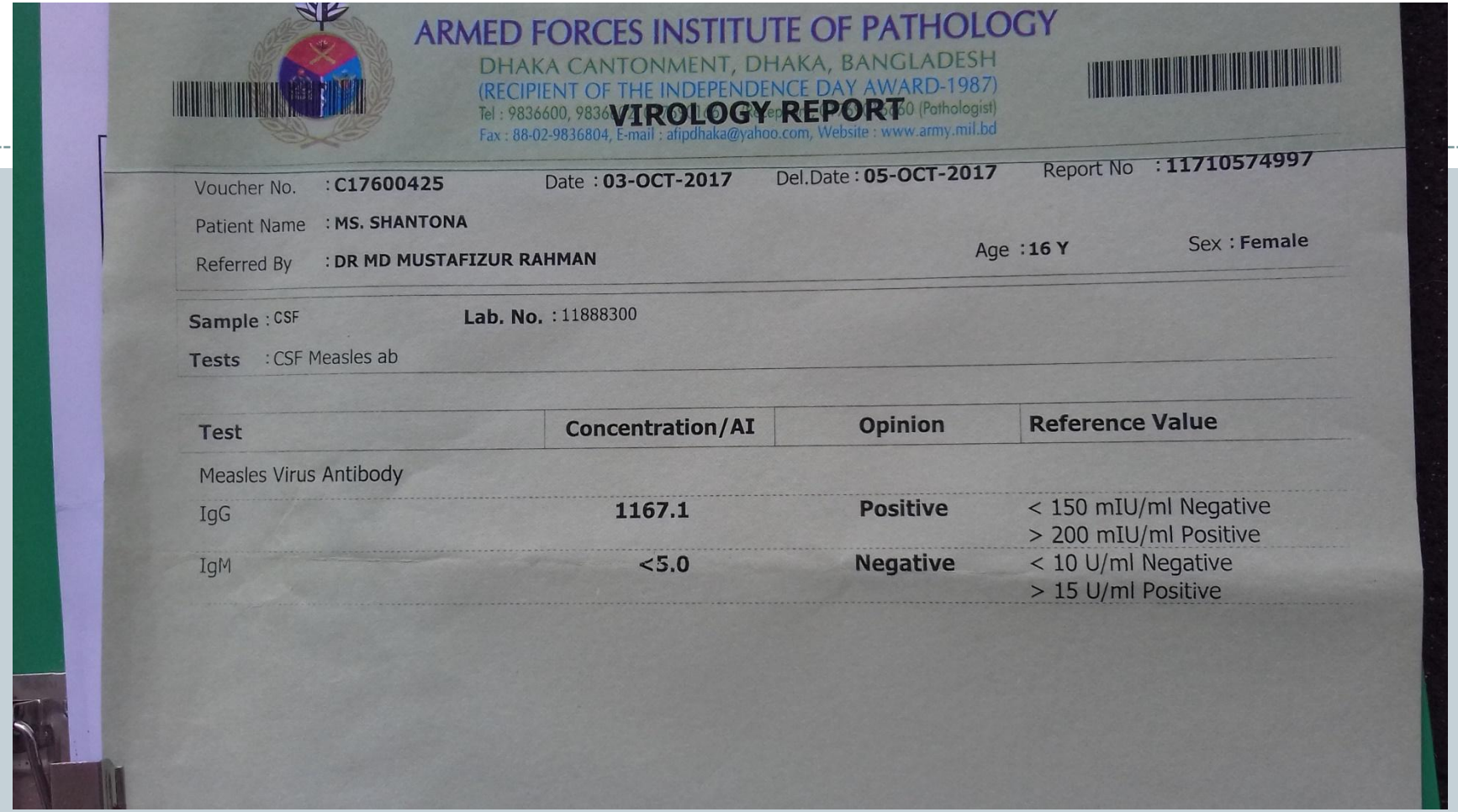
- Microscopic Examination:
- Total WBC count: 4/cumm
- Total RBC count: 120/cumm
- Neutrophil: 00%
- Lymphocytes: 100%
- AFB not found
- Gram staining: Bacteria Not Found

# CSF study ( 03-10-17)

- Biochemical Study:
- Protein 42.60 mg/dl  ( Ref : 15-45 mg /dl)
- Glucose 75.60 mg/dl  ( Ref : 40-85 mg/dl)

# CSF for Measles Antibody

| Test | Concentration | Opinion |
|---|---|---|
| Measles Antibody | | |
| IgG | 1167.1 miu/ml | Positive |
| IgM | <5.0 | Negative |



# ARMED FORCES INSTITUTE OF PATHOLOGY

DHAKA CANTONMENT, DHAKA, BANGLADESH
(RECIPIENT OF THE INDEPENDENCE DAY AWARD-1987)
Tel : 9836600, 9836[illegible] (Pathologist)
Fax : 88-02-9836804, E-mail : afipdhaka@yahoo.com, Website : www.army.mil.bd

## VIROLOGY REPORT

Voucher No. : **C17600425** Date : **03-OCT-2017** Del.Date : **05-OCT-2017** Report No : **11710574997**

Patient Name : **MS. SHANTONA**

Referred By : **DR MD MUSTAFIZUR RAHMAN** Age : **16 Y** Sex : **Female**

**Sample** : CSF **Lab. No.** : 11888300

**Tests** : CSF Measles ab

| Test | Concentration/AI | Opinion | Reference Value |
|---|---|---|---|
| Measles Virus Antibody | | | |
| IgG | **1167.1** | **Positive** | < 150 mIU/ml Negative<br>> 200 mIU/ml Positive |
| IgM | **<5.0** | **Negative** | < 10 U/ml Negative<br>> 15 U/ml Positive |

# Final Diagnosis

- **Subacute Sclerosing Panencephalitis**


THANK
YOU
GRACIAS
ARIGATO
SHUKURIA
BOLZÏN
MERCI
BİYAN
DANK'SCHEEN
TASHAKKUR ATU
SUKSAMA
GRAZIE
MEHRBANI
GOZAIMASHITA
EFCHARISTO
JUSPAXAR
SHUKRIA