



PYOGENIC VENTRICULITIS DUE TO STREPTOCOCCUS PNEUMONIAE IN AN IMMUNOCOMPETENT GIRL : CASE REPORT

Dr Gurdeep S Dhooria

Department of Pediatrics, Dayanand Medical College & Hospital, Ludhiana, Punjab, India

INTRODUCTION AND AIMS

- Meningitis and ventriculitis are caused by a variety of microorganisms and carry significant rates of morbidity and mortality. Even with prompt diagnosis and treatment, there may be serious sequelae.
- We present here a 4 years old girl with Streptococcus pneumoniae meningitis, a vaccine preventable disease, whose course was complicated with development of hydrocephalus and ventriculitis. Despite modern intensive care and antibiotic treatment, morbidity and mortality associated with Streptococcus pneumoniae meningitis remain high.

CASE REPORT

A four years old girl, came in pediatric emergency in a moribund state with history of High grade fever, Headache, Vomiting x 15 days, Altered sensorium x 3 days, Refractory seizures x 1 day, Past medical history was uneventful, with no contact with tuberculosis
Growth and development: Normal
Weight: 15.6 kg (normal); Height: 99 cm (normal)

Examination

Sick looking, febrile (102 F), Pulse rate: 140/min RR: 34/min, BP: 100/52mmHg with bounding pulses. Brisk CFT. Mild palor,
No clubbing, lymphadenopathy, cyanosis, icterus.
CNS: Obtunded, GCS: E1M1V1, pupil equal NSRL, No cranial N palsy, tone dec in all limbs, DTR mute, Planters extensor bilateral.
Neck stiffness ++
Chest examination: Bilateral air entry normal. No adventitious sounds
Cardiovascular examination: Heart sounds normal. No murmur.
Abdominal examination: Soft, No organomegaly No free fluid.

Hospital Course

- ❖ She was treated with antibiotics, anticonvulsants, ventilator and inotropic support and other supportive care.
- ❖ MRI brain showed development of hydrocephalus and ventriculitis in addition to meningeal exudates which was treated by treated with external ventricular drainage by neurosurgery team and frank pus was drained.
- ❖ After 2 weeks of mechanical ventilation, tracheostomy was required due to poor sensorium.
- ❖ Patient was shifted on transport ventilator to local hospital after PICU stay of more than 2 weeks.
- ❖ Course of 4 weeks of sensitive antibiotics were completed.
- ❖ Patient was discharged on RT feeding, with major sequela.
- ❖ Final Diagnosis: Streptococcus pneumoniae meningitis with ventriculitis and hydrocephalus.

Investigations	Results	Investigations	Results
Hb	10.6 gm/dL	Sr Albumin	4.1 gm/dL
TLC	16.4 X 10 ³ /cumm	Sr Calcium	9.7 mg/dL
DLC	P 92 % L 8 %	Sr Bilirubin (T/D)	0.18/0.17 mg/dL
Platelet Count	624000/cumm	SGOT	22 IU/L
PBF	Microcytic hypochromic	SGPT	11 IU/L
Optimal for Malaria	- ve	BI Urea	38 mg/dL
ESR	120 mm/hr	Sr Creatinine	0.43 mg/dL
CRP	325 mg/L	Sr Sodium	138 mg/dL
CSF cytology	1000 cells/ cumm	Sr Potassium	3.56 mg/dL
	All neutrophils	APTT	N
CSF protein	587 mg/dL	PTi	N
CSF sugar	001 mg/dL	Urine Routine	N
CSF chloride	118 mmol/L	Xray chest	N

CSF Gram stain: Gram positive cocci in pairs ++

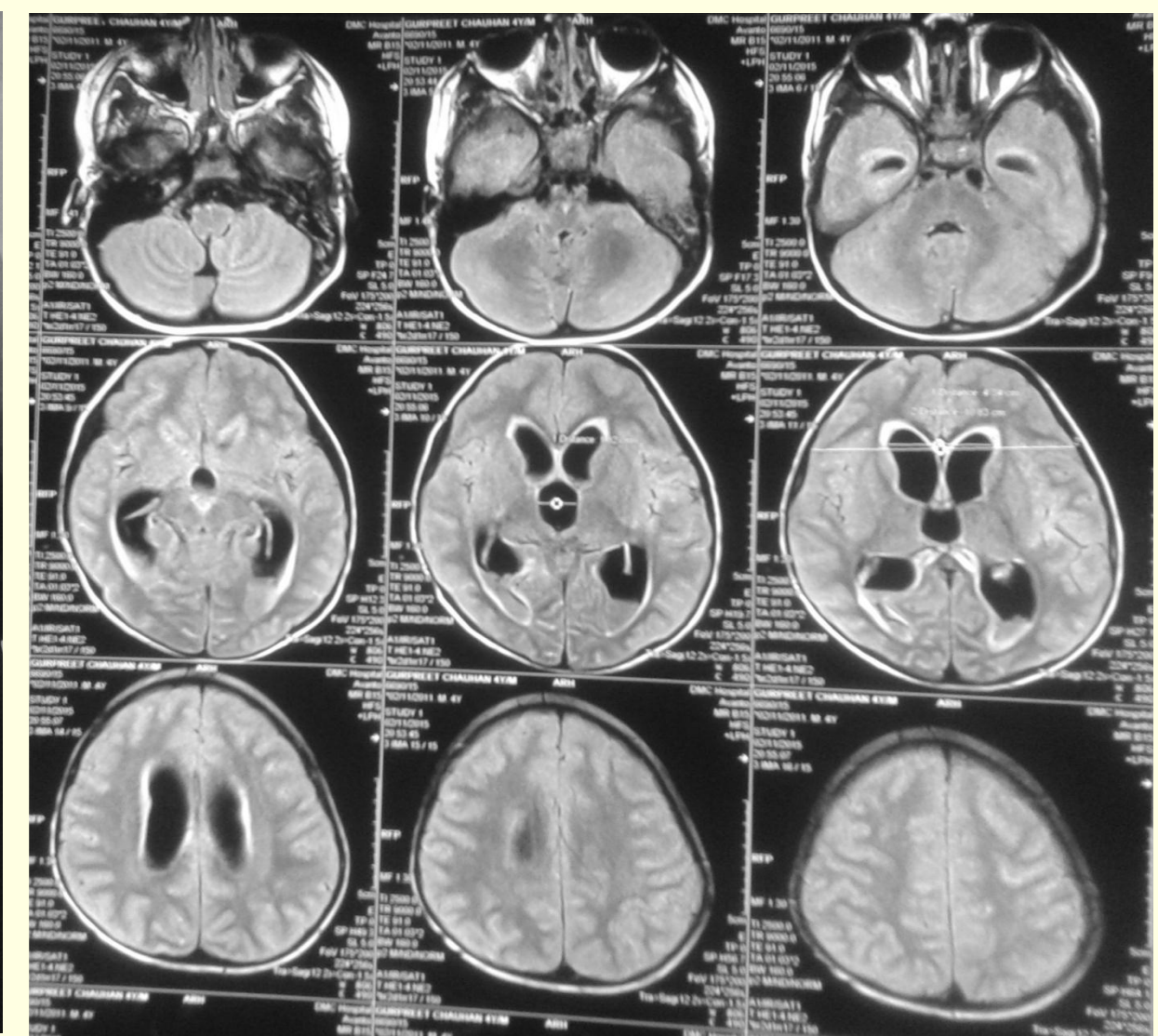
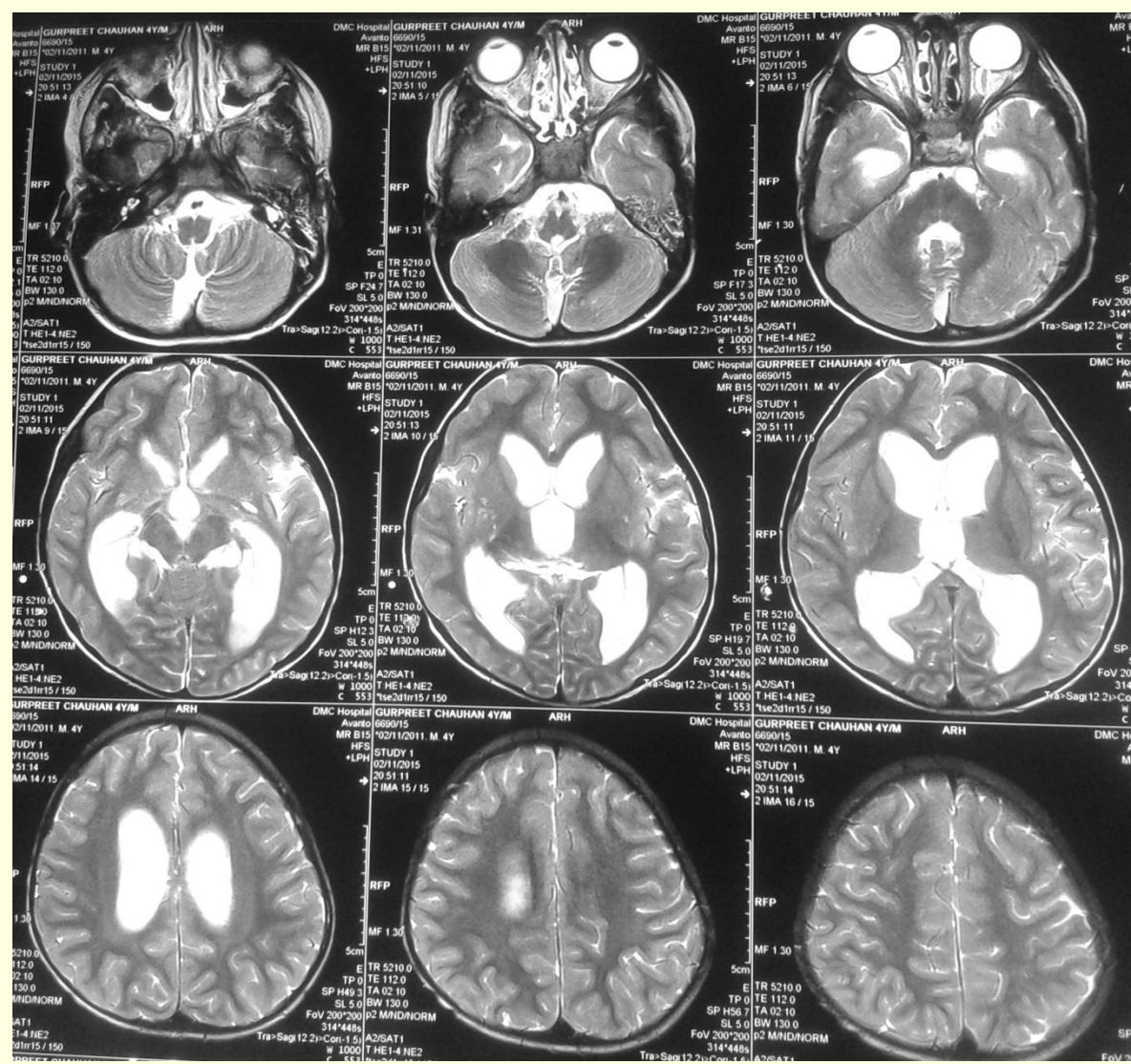
CSF Culture: positive for Streptococci pneumoniae

Blood culture: positive for Streptococci pneumoniae

Latex aggl Ag test: Positive for Streptococci pneumoniae

MRI brain: Supra ventricular system dilated VH ratio 4:10 with periventricular ooz. CSF fluid level in bilateral lateral ventricles. Restriction on DW/ADC s/o ventriculitis.

On FLAIR- incomplete suppression of CSF seen over bilateral cortical sulci and basal cistern s/o exudates.



DISCUSSION

- ❖ Neurologic complications are still common with pneumococcal meningitis despite antibiotic therapy and intensive neurologic care.
- ❖ The most frequent sequelae are cerebral vasculopathy, cerebral oedema, and hydrocephalus.
- ❖ Persistence of high grade fever, delirium, seizures in a clinically moribund patient with pyogenic meningitis should raise suspicion of ventriculitis.

CONCLUSIONS

- ❖ We present here a 4 years old girl with Streptococcus pneumoniae meningitis, a vaccine preventable disease, whose course was complicated with development of hydrocephalus and ventriculitis, who survived with significant neurological deficit.
- ❖ Vaccination is important strategy in the prevention of Pneumococcal meningitis and its complications.