INTRODUCTION

Bacterial meningitis is a very serious fatal disease caused by various microorganisms including bacterial agents. Bacterial meningitis is associated with a very high rate of mortality and morbidity in children and infants. Early prompt diagnosis decreases this rate to about 2-5%. Most fatalities occur in pneumococcal meningitis. Severe neurological disabilities occur in 10-20% of the cases. Deafness is seen in 50% of the patients (30% pneumococcal meningitis, 10% meningococcal and 5-20% in H. influenza type B-meningitis). Unfortunately 30% of newborn succumb to death as a result of this disease (1-4).

CASE PRESENTATION

The infant was an 11 months old girl weighing 9.2 kg. She was admitted with the chief complaint of fever (39°C) that had started 5 days prior to admission. There was history of a minor head trauma 10 days before the admission (Figures 1-4).

On admission, CBC was sent to the laboratory, the results of which were:

- WBC=8800/mm³ (42% poly, 58% lymph)
- Hb= 10.9 g/dl, ESR=121, CRP=1+
- Ca= 8.8 mg/dl, Blood sugar=151 mg/dl
- Platelets=230000/mm³
- U/A= Normal
- BUN=20 mg/dl
- Creatinine= 0.5 mg/dl

However because of the high fever and ESR level, LP was performed. The laboratory report of the CSF was as:

- Sugar=25 mg/dl, Protein=52 mg/dl
- WBC=62000(90% poly, 10% lymph)
- RBC=300
- CSF smear= Gram positive
Treatment was initiated with ceftriaxone (50 mg/kg/dose every 12 hrs), vancomycin (15 mg/kg/dose) and dexamethasone.

The patient underwent brain CT scan on the third day of operation. The report was: Subdural effusion with few isodense areas in both frontal lobes (Figure 5).

Four days after admission another CBC was done which showed:
WBC=19600 (73% poly, 26% lymph)
Platelet= 507000/mm³, ESR=82

Ninth day of admission, LP was done which showed:
WBC=100, Protein=25, mg/dl, Sugar=45 mg/dl
Twelfth day CBC showed:
WBC=20700/mm³ (80% poly, 18% lymph, 2% band)
Hb= 9.4g/dl, ESR=135, CRP=2++

The patient underwent a second brain CT scan on day 14 of treatment. Brain scan reported: There is evidence of abnormal frontal lobe bilaterally more prominent on the left side. Fluid collection with mild mass effect in left frontal area (epidural empyema) (Figures 6 and 7).

Therefore considering the hyperleucocytosis polynucleosis, ESR 135 and CSF cell count =100, atypical Kawasaki’s Disease-a form of vasculitis-was considered as diagnosis for the patient. She was put on IVI G (2gr/kg) and aspirin (100mg/kg) for two weeks.
Meanwhile ABR was done: for left ear 20 db H1 and right ear 110 db H1 was recorded (Figure 8).

All other investigations including abdominal sonography, echocardiography and ophthalmoscopy were normal.

After two weeks of aspirin consumption the dose was reduced to 100 mg/day and continued for 3 months.

Thirty six days after treatment, CBC was:
WBC= 8100/mm$^3$ (31% poly, 66% lymph)
Platelet=370000, Hb=11.9 gr/dl
ESR=44, CRP=Negative

Forty seven days after treatment, CBC was:
WBC=8500 (31% poly, 67% lymph)
ESR=13, Platelet=34 000, CRP=Negative

After 4.5 months of treatment, laboratory findings and brain CT scan had become normal (Figures 9-12).

**DISCUSSION**

*Streptococcus pneumoniae* has been dramatically altered by the use of vaccine in February 2000. Risk factors include otitis media, sinusitis, and pneumonia (3,5). Diagnosis of acute bacterial meningitis is confirmed by analysis of the CSF. Complications include seizure, increased ICP, cranial nerve palsies, stroke, cerebral herniation and thrombosis (1,4). Collections of fluid in the subdural space develop in 10-30% of patients. CT and MRI scanning confirm the presence of a subdural effusion that should be treated by aspiration. Fever usually resolved within 5-7 days of the onset of therapy. Prolonged fever >10 days is noted in about 10% of patients due to Nosocomial or secondary infection (2).

Kawasaki Disease (KD) is a systemic vasculitis that occurs most commonly in children less than 5 years of age (4). Most cases of KD occur in children younger than 12 years of age. In 1967 Tomisaku Kawasaki developed diagnostic criteria for an apparently new illness. The illness is characterized by fever and the following clinical feature: (1) bilateral bulbar conjunctival injection without exudates, (2) erythematous mouth and pharynx, strawberry tongue, and red, cracked lips, (3) a polymorphous, generalized, erythematous rash that can be morbilliform, maculopapular or scarlatiniform or may resemble erythema multiform, (4) changes in the peripheral extremities consisting of induration of the hands and feet with erythematous palms and soles, often
with later periungual desquamation and (5) acute, nonsuppurative, usually unilateral, cervical lymphadenopathy with at least one node 1.5 cm in diameter.

For the diagnosis of classic KD, patient should have fever at least for 4 days and at least 4 of these 5 features without alternative explanation for the findings. Other findings include 10%-20% meningismus with CSF pleocytosis (4,6-8).

Incomplete KD can be diagnosed. Incomplete KD is more common in infants younger than 12 months of age than in older children (9).

CONCLUSION

The role of a physician in diagnosing medical emergencies is very crucial. With accurate and on-time decision a physician can help in the onset of a fruitful treatment. In cases with high grade fever but a normal CBC, we recommend other investigations such as CRP, ESK, and LP.

REFERENCES

A Very Rare Form of Bacterial Meningitis: Case Report


