Abstract:
Tuberculous subdural empyema are extremely rare manifestations of central nervous system tuberculosis. Here is a rare case report of TB subdural empyema with osteomyelitis presenting with seizures, hemiparesis. A right frontotemporal parietal craniotomy was performed and the subdural empyema was evacuated. The Ziehl Nielsen staining of the aspirated pus yielded acid fast bacilli. Prompt administration of antituberculous treatment resulted in complete recovery of the patient. This case is being reported because of its rarity of associated osteomyelitis of bone and to stress the importance of routine staining for AFB in cases of subdural empyema.

Keyword: Subdural empyema, hemiparesis, seizures, acid fast staining, osteomyelitis

Introduction:
48 years old female, from vaniyambaadi, house wife by occupation was apparently normal 15 months ago. In April 2011, she had a swelling in the right side of the scalp, which gradually increased in size and burst open after 1 month with seropurulent discharge with persistent sinus was present. In December 2011, she had an episode of seizure – Focal without LOC preceded by aura in the form of sensation of twisting of tongue and feeling of lump in her throat. She initially had frequent blinking of eyes and fine jerky movement of right hand. The episode lasted for 3 to 5 minutes. The consciousness was fully preserved during the seizure episode. There was no postictal confusion or weakness. She had seven similar episodes of seizures between December 2011 and July 2012. She had undergone treatment in private hospital, the treatment details were not known. Patient was advised surgery but patient was not willing for surgery. On July 2012, she presented to us with difficulty...
in speaking in the form of difficulty in articulating and slowness of speech. She has H/O weakness of left upper and lower limbs. She had difficulty in rising from bed using her left upper limb and difficulty in gripping objects with left hand, she has difficulty in holding chappals with left leg while walking. She has drooling of saliva from left side of mouth. H/O loss of weight present. H/O loss of appetite present. No H/O trauma.

**PAST HISTORY**  
K/C Hypertension (T.Atenolol & T.Amlodipine). No H/O Diabetes, Bronchial asthma, IHD and pulmonary TB or contact with pulmonary tuberculosis. **PERSONAL HISTORY**  
She had regular menstrual cycles. 2 of her children died at infancy. She attained menopause 1 year back

**EXAMINATION:**  
Well built, well nourished, Not anaemic / icteric, Pulse 88/min, BP 150/90mmhg, No lymphadenopathy, No neurocutaneous markers

**CNS EXAMINATION:**  
Conscious, obeys simple commands, Telling name, Dysphasic PUPILS BE 3MM reacting, EOM full, Left UMN facial palsy Other cranial nerves Normal,

**SPINOMOTOR SYSTEM**  
BULK Normal in all 4 limbs, TONE Increased in Left upper and lower limb.

**POWER RIGHT LEFT:**  
UPPER LIMB 5 4-LOWER LIMB 5 4

**REFLEX BICEPS TRICEPS SUPINATOR KNEE ANKLE PLANTAR JERK RIGHT ++ ++ ++ ++ + FLEXOR LEFT ++ ++ +++ +++ ++ EXTENSOR**  
Rhomberg’s negative, Cerebellum normal, Spine normal Cranium

Two sinuses over right parietal region of scalp with seropurulent discharge. A swelling of size 1.5 X 1.5 cm present adjacent to the sinuses. Sinuses were extending into the underlying parietal bone (? subperiosteal).

**Investigation**  
Hb – 10.8gm%  
Urine routine – normal  
TC-10600 cells/cuml  
DC-P54%,L40%,E6%  
ESR- 30 MIN 15mm 1 HOUR-40mm  
Sugar – 92mg%, urea- 32, creatinine – 1.1  
MANTOUX TEST 12mm RIGHT FOREARM-POSITIVE  
HIV –NEGATIVE  
HBsAg - NEGATIVE  
ECG-normal, CXR – normal  
Cardiac evaluation – normal  
Carotid doppler - normal
A diagnosis of RT FRONTOTEMPOROPARIETAL SUBDURAL EMPYEMA WITH OSTEOMYELITIS was made. Patient was taken up for surgery. Right Mark incision made Skin and muscle flap raised. The underlying bone was unhealthy, osteolytic with diffuse bleed from the surface. Granulation tissue was present and protruding through the defect. There was pus coming from the bone defect. Dura was laden with debris and unhealthy granulation tissue. Dura was thick and plastered to the underlying brain. Adhesions separated from brain parenchyma. Multiple loculated pus pockets was seen and broken. 5 ml Pus aspirated. Duroplasty done. Post op period uneventful. Patient was started on ATT. Patient improved and patient was discharged. Patient under regular followup.
Discussion:
Although tuberculous meningitis and tuberculomas are frequent manifestations of CNS tuberculosis, the incidence of tuberculous subdural empyema is rare. Most of the cases occur by hematogenous spread from extracranial locations. Intracranial subdural tuberculous empyema is an extremely rare entity. This case report highlights the importance of simple investigations like staining for acid fast bacilli in all cases of subdural empyema. In the aetiological analysis of 75 cases of subdural empyema, tuberculous aetiology was found only in 4% of the cases.

Most of the tuberculous empyema are hematogenous in origin, and spread of infection to the brain could occur due to active tuberculous infection elsewhere in the body. A tuberculous abscess is characterized by an encapsulated collection of pus containing viable tubercular bacilli without evidence of the classic tubercular granuloma. Subdural tuberculous empyemas of the brain show a typical granulomatous reaction, comprising of epithelioid cells and giant cells around a central area of necrosis. In contrast, a tuberculous abscess shows only chronic, nonspecific inflammatory changes. A giant cell reaction and epithelioid cells are lacking. There are only two reports of subdural empyema due to tubercle bacilli reported in the adult population. Subdural empyema is an extraaxial collection of pus, often associated with pyogenic abscess. This case is reported because of its rarity and to highlight the importance of Ziehl Neilsen stain in all cases of brain abscess and subdural empyema, as the detection of tuberculous etiology might be life-saving to the patient.

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