Pott's Puffy Tumour

Sir,

Pott's puffy tumour is more often seen in adults as the frontal sinus is not developed in infant and children.[1] Pott puffy tumour is a non-neoplastic complication of sinusitis - an osteomylitis of frontal bone caused by microorganisms spread from blood vessels of mucosa lining of sinus.[2] Infection may spread anteriorly into the forehead or posteriorly to form a subdural abscess. There is typically a fluctuant swelling over the forehead, through it is not necessary to be painful. The actual incidence is not known. Most of the cases take a fulminating course with rapid physical debilitation, clouding of consciousness and development of intracranial complication.

Staphylococcus aureus is the most common etiologic agent, being responsible for more than 50% of cases.[3] Classification of osteomylitis is described on duration of symptoms, route of spread of infection and host response.[4] Duration of symptoms being less than 2 weeks is termed an acute osetomylitis, 2-3 weeks as sub-acute stage and more than 3 weeks as chronic osteomylitis. Aspiration of swelling is not done due to the likelihood of discharging sinus formation.

Bone tuberculosis is usually not as common as pulmonary tuberculosis and accounts for only 1 - 3% of the cases. Bone tuberculosis is always secondary, the primary foci being either in the lungs, lymph nodes or the gastrointestinal tract. Enlargement of regional lymph nodes and the presence of an abscess near sinus is of great significance. Bone pain which does not respond to analgesic medication may be due to infection or neoplasia. If plain radiographs are normal sensitive investigations such as MRI and CT are required to detect and localize lesions. The presence of a sinus from which pyogenic organisms are grown on culture, may lead to a diagnosis of chronic pyogenic osteomylitis, but if the sinus persists after suitable antibiotics, underlying tuberculous osteomylitis must be considered. Anti-tuberculous drugs remain the mainstay of treatment. Bone drilling is not routinely required with modern antibiotics therapy.[5] It is important to diagnose this rare condition to avoid complications such as tuberculous meningitis.

A 28-year-old lady presented to the ENT, OPD with history of forehead swelling on the right side, cervical lymph nodes swelling on the left side, headache, blurring of vision and watering of right eye for the last one month. On examination of nose, red mucosa, mild mucoid secretion and mild bilateral inferior turbinate hypertrophy were found. Ear and throat were found normal. The forehead swelling was single located on the right side in the region of frontal sinus measuring 4 cm x 4 cm. On palpation, the temperature of overlying skin was normal with mild tenderness and soft to firm consistency. Case was referred to eye specialist for opinion which showed bilaterally reduced visual acuity (R 6/12, L 6/18). The rest of ocular examination was normal. Refraction correction was done in both eyes with 0.75 spherical-6/6. Lesion was opined to be having no relationship with eye. CNS examinations were normal. X-ray chest was normal. Blood count showed normal total results. ESR was 35 mm after 1st hour. MT test showed a diameter of 17 mm. Anterior and posterior cervical lymph node, sub-mandibular and posterior auricular lymph node were enlarged.

CT scaning of brain without contrast (Figure 1) showed a soft tissue swelling in the right frontal region, associated with underlying erosion and sclerosis of the frontal bone most likely to be due to tuberculous osteomylitis.

Ultrasound of neck confirmed the cervical lymph node enlargement. Thyroid was found normal. FNAC of left cervical lymph node was done. Microscopic examination revealed lymphoid cell mixed with collection of epitheloid type of histiocytic cells and a single multinucleate giant cell histiocyte. The patients were treated with antibiotics. Clarithromycin 500 mg two tablets once a day with Metronidazole 400 mg one tablet thrice a day for 15 days along with antituberculous 4-drug therapy consisting of Rifampicin, INH, Pyrazinamide and Ethambutol. After 15 days antibiotics therapy was stopped and antitubercular treatment was continued after further one and half month therapy.

Figure 1: Computed tomography scan of brain without contrast demonstrating soft tissue swelling in the right frontal region associated with underlying erosion of frontal bone and sclerosis.

After 3 months, Ethambutol was withdrawn and three-drug regime was continued for further 9 months. Later, only Rifampicin and INH was continued for further 6 months. Total duration of treatment was 18 months. Along with antitubercular drugs 10 mg Pyridoxine were given simultaneously to prevent peripheral neuropathy due to INH. Dose was adjusted according to the body weight. A discharging sinus developed and swelling was reduced upto 85% of the presenting size. Size of the left cervical lymph node also reduced markedly. The sinus material were sent to laboratory for analysis report revealed serum, leucocytes caseous material, granulation tissue and Tubercle bacilli. Patient is still on regular follow-up.

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