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內文：

Introduction

- Extrapulmonary tuberculosis (EPTB) is defined as tuberculosis (TB) of organs other than the lungs, such as the pleura, lymph nodes, abdomen, genitourinary tract, skin, joints, bones, and meninges.
- EPTB: 15% ~20% of all cases of TB among immunocompetent adults; >50% of the cases in HIV-positive individuals.
- causes for the increasing proportion of EPTB: HIV pandemic, improved case recruitment because of expanding services, reduction in infectious TB, and immigration resulting in changing demographic
- Osteoarticular TB commonly in spine and large weight-bearing joint. Joint involvement occurs by hematogenous leading to bacterial colonization of vascular cancellous bone. Infection :subchondral ->cartilage, synovium, and joint space
- Although head-and-neck TB comprises nearly 10% of all extrapulmonary manifestations of the disease, TB of the oral cavity and the maxillofacial region is rare. Tuberculous involvement of TMJ (cancellous component of the mandibular condyle) is uncommon.
- Rare lesions such as TMJ TB may pose a diagnostic challenge, but need to be considered in light of the increasing incidence of EPTB.

Case Report

- C.C.: a swelling on the right side of the face for 1 month
- P.I.: This 45-year-old man complained of a swelling on the right side of the face for 1 month (Fig 1). He had had difficulty chewing for the last 3 months and mild swelling developed approximately 2 months previously, with rapid growth in the last month. The patient was febrile over the past 3 weeks. He consulted a local dentist, who prescribed antibiotics and analgesics, which brought him no relief. Otherwise, the patient's medical history and intraoral examination were noncontributory. clinical examination: preauricular scar after trauma 15 years ago; swelling: tender, firm, extended from preauricular region to zygomatic arch. temperature of overlying skin :normal. mouth opening <2 fingers

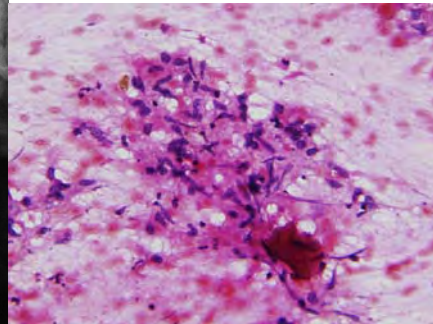


(Fig 1)

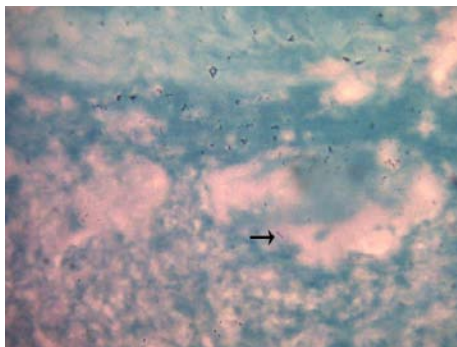
- Differential Diagnosis: infection and neoplasm arising from the TMJ or the parotid gland. Suppurative arthritis, osteomyelitis, osteoblastoma, osteosarcoma, and malignant lesions of the parotid gland
- Further Examination:
 1. Blood test: erythrocyte sedimentation rate 72mm/h(normal value, 14 mm/h),HIV(-),hepatitis B(-) and C(-)
 2. panoramic radiograph: erosion of the right condyle and widening of the glenoid fossa(Fig2).
 3. aspiration cytology: scattered granulomas composed of epithelioid cells and some lymphocytes (Fig3). Necrotic debris was also identified in some areas. Ziehl-Neelsen stain showed occasional acid-fast bacilli (AFB) (Fig4).
 4. MRI: peripheral enhancement of the right TMJ and surrounding muscles resulting from caseating granuloma formation and diffuse inflammation (Fig 5).
 5. Mantoux test: positive
 6. chest and spine radiographs, computed tomography scan of the abdomen: normal
 7. sputum culture: negative



(Fig 2)



(Fig 3)



(Fig 4)



(Fig 5)

- Definitive Diagnosis: primary TB of the condyle
- Treatment: 3-month antitubercular regimen consisting of oral rifampicin, 600 mg/d; isoniazid, 300 mg/d and pyrazinamide, 1750 mg/d; and streptomycin injection, 1000mg/d. Streptomycin was discontinued, and the rest of the drugs were continued for 6 more months.
- Follow up:

1. After 9 months of the antitubercular drug therapy, the condition fully resolved.

2. The 1-year follow-up examination showed no recurrence of the disease and showed normal mouth opening and functional movements.

Discussion

- Osteoarticular TB:
 1. can be primary or due to a pulmonary focus
 2. usually monoarthral and involves the cancellous portions of the bone
 3. major etiologic factors: Hematogenous dissemination and trauma
- oral TB:
 1. relatively uncommon, with frequent involvement of the buccal mucosa, tongue, gingiva, and mandible
 2. Despite very few cases of oral TB in patients with positive sputum samples, local injury is blamed for the progression of the tubercular infection from the oral cavity to the jaw bones
- TMJ TB:
 1. very few cases been reported in the literature
 2. clinical features: pain, trismus, and swelling
 3. differential diagnosis: benign and malignant neoplasms of the joint and infective processes such as acute suppurative arthritis, osteomyelitis, and chronic tuberculous arthritis
- Most nonpulmonary forms of primary TB:
 1. hematogenous dissemination.
 2. in our case :patient had a history of trauma to the side of the face, so trauma cannot be ruled out as the etiologic factor.
- multidrug-resistant tuberculosis(MDR-TB):
 1. approximately 440,000 persons worldwide in 2008 and 1/3 died of the disease ,almost 50% occur in China and India
 2. may result from prescribing an unreliable regimen or unreliable drugs or failing to ensure that the patient takes the drugs as prescribed and for the full prescribed period
 3. Treatment: “second-line” reserve drugs
- diagnosis of osseous TB (strong clinical suspicion, clinical evidence of the disease, the results of cytologic/histopathologic examination, and imaging)
 1. gold standard for diagnosis: culture of *Mycobacterium tuberculosis* from bone tissue (Showing TB granulomas and AFB is important for the diagnosis of TB)
 2. FNAC: noninvasive tool and has an established role in the diagnosis of extrapulmonary TB, as well as in oral lesions
 3. Cytology smears: should show the epithelioid granuloma with or without necrotic material

3 types of Epithelioid granulomas:	rates of AFB positivity
Type I: epithelioid granuloma without necrosis,	7.4%
type II: epithelioid granuloma with necrosis	35.6%
type III: necrosis without epithelioid granuloma	54.2%

4. Mantoux test: positive in more than 90% cases of osteoarticular TB

(may also indicate a hypersensitivity reaction to tuberculin proteins or a previous exposure rather, than active tubercular infection.)

5. Radiographic findings: show erosion of the condyle and glenoid fossa (TB is usually monoarticular in nature, whereas RA is polyarticular)

6.MRI: increased synovial membrane thickness, bone erosions, bone marrow edema, and extra-articular cystic collections

(Synovial membrane thickness less than RA; size of bone erosions and rim enhancements around erosions is greater than RA)

- treatment of tuberculous bone infection:
 - 1.a long course of antituberculous drugs
 2. surgical excision and decortications(for the most refractory cases)
- Early diagnosis and treatment of osteoarticular TB can achieve 90% to 95% cure with nearly normal function
- Awareness of the clinical features of this disease, combined with adequate history taking, clinical examination, and investigations in all clinical care settings, is of critical importance to ensure lesser destruction and fully functional rehabilitation of the TMJ.

題號	題目
1	Which of the following statement about TB is false? (A) Primary TB is usually asymptomatic. (B) Classically,the lesions of secondary TB are located in the apex of the lungs. (C) Typically,patients of primary TB have a low-grade fever,malaise,anorexia,weight loss,and night sweats. (D) Involvement of the skin may develop and has been called lupus vulgaris.
答案(C)	出處：Oral and Maxillofacial PATHOLOGY (THIRD EDITION) P196
題號	題目
2	In patients with AIDS,what proportion will have extra-pulmonary lesions? (A) more than 20% (B) more than 30% (C) more than 40% (D) more than 50%
答案(D)	出處：Oral and Maxillofacial PATHOLOGY (THIRD EDITION) P196