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Accidental diagnosis of tubercular lymphadenitis: A case report

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Abstract
Dentists are treating compromised medical patients on daily routine which causes threat to dentist as well as patient by cross infection. Dentist should have knowledge regarding signs and symptoms associated with the disease. So, that they can protect themselves and patient could also get the treatment as early as possible. Tuberculosis is rapidly spreading now a days and has became challenging for practitioners.

Keywords: accidental diagnosis, tubercular lymphadenitis

Introduction
The granulomatous process is any process that generates granuloma in the body. Granulomas are a mixture of mononuclear inflammatory cells and ormodified macrophages surrounded by a ring of lymphocytes and giant cells on histological examination [1]. Granulomatous disease can be caused by an autoimmune, infectious, idiopathic, or genetic condition [2]. Tuberculosis, cat scratch disease, syphilis, leprosy, and fungal infections are all transmissible diseases which causes formation of granuloma in the head and neck. Tuberculosis is caused by inhalation of Mycobacterium tuberculosis into the lungs. The most prevalent symptom of TB in the head and neck is lymphadenopathy. Lymphadenopathy is the most commonly seen disease in dental clinic. Dentists have a known occupational risk of tuberculosis since they operate in close proximity to patients nasal and oral cavities, with the possibility of potentially infected sprays being generated during regular operational procedures [5]. So, here is the case report presenting the case which was accidently diagnosed.

Case Report
A 16 years old female patient came to the department of Pediatric and preventive dentistry with chief complaint of pain and swelling in left mandibular posterior tooth region since 15 days. On extraoral examination a scar was appreciated on right supraclavicular region. In medical history patient gave history of incision and drainage of lump 1 month back by some local practitioner in her village and was on medication for same. On asking she was unable to give any details of medications. Patient also gave history of decreased appetite since 1 month, no history of cough and fever was given by patient. After 5 days in 2nd visit of endodontic treatment there was recurrence of lump adjacent to previous location. Lump was non tender and temperature was raised, fixed and hard on palpation. Size of the lump was 3*2 cm. Patient was referred to medical college for further diagnosis and treatment.
FNAC (Fine needle aspiration cytology) was performed from right supraclavicular lymph node. Smears were prepared, processed routinely and stained with leishman-giemsa stain. On microscopic examination smear shows lymphoid cell, well defined epithiloid cell granulomas and occasional giant cells over a necrotic background. These feautures indicates granulomatous lyphadenitis with necrosis of right side of neck. PPD (purified protein derivative) of the patient was 15mm in diameter, ESR was 40 mm, TLC was 7890 and platelets were 3.46 lakh. On the basis of FNAC report and PPD ATT (Antitubercular therapy) was started for initiative phase of 6 months followed by continuation phase of 6 months. Tablet R-CINEX-EZ once a day was advised.

Discussion
Tuberculosis is a granulomatous inflammatory process and is one of the oldest disease affecting human beings [6]. It is usually caused by Mycobacterium tuberculosis (MTB); however, M. avium, M. bovis, M. kansasii, and M. scrofulaceum have also been implicated. It usually affects the lungs but in 1/3 rd of cases other organs are also involved. Tuberculosis has lately resurfaced as a major global public health issue. Due to ciggrate usage, alcohol consumption, hereditary factors, hormonal variables, and a delay in diagnosis, it is more frequent among males. According to the World Health Organization, TB kills over 2 million people each year, with 1 billion people becoming infected, over 150 million becoming sick, and 36 million dying from the disease between 2002 and 2020. Infection rates are highest in the Indian subcontinent, Southeast Asia, and Africa.[5]
The affecting organ for tuberculosis is bronchopulmonary apparatus. The patient had gone through the mantoux test and blood test. The mantoux test was positive, ESR was raised and FNAC report showed well defined epithiloid cell granulomas and occasional giant cells. All these findings supported our clinical diagnosis for tubercular lymphadenitis.

The potential of TB transmission in the dental context is a serious issue for dentists in light of the disease's re-emergence. At dental clinics, TB is commonly spread from doctor to patient or from patient to dental staff. Airborne transmission is one of the options. either by a common route or by direct contact with contaminated food. On the dentist's fingertips, there could be because of instruments or mycobacteria. As a result, it's critical to have adequate workplace standards in place to prevent the spread of the disease. Routes of transmission of infection are

1. Direct contact with blood, oral fluids, or other body fluids.
2. Contact with contaminated instruments, equipment, or ambient surfaces in an indirect manner.
3. Microorganism-containing droplets in contact with the eyes, nose and mouth.
4. Inhalation of airborne germs that can linger in the air for an extended period of time [7].

The following are the suggested dental care guidelines for tuberculosis patients

1. Avoid using ultrasonic scalers and high-speed handpieces on patients who are actively infected. (M. tuberculosis aerosolized can live for up to nine hours.) To limit aerosol production, any procedure requiring high volume suction is required.
2. Isolate with a rubber dam and a high vacuum suction.
3. (Rubber dam should be avoided if the patient has a productive cough.)
4. Use of eye shields, facemasks, head caps, gloves and medical gowns.
5. Use a face mask that is well-made, soft pleated, and has a high level of filtration. Because standard face masks do not protect against the spread of tuberculosis, particle face masks should be used and changed frequently. Masks for the face should be used only when necessary.
6. Regular fumigation of dental operatories. Cleaning and disinfecting critical and semi critical contact surfaces like Dental chair and accessories. Anti-bacterial sprays may be used.
7. Use of barrier techniques.
8. Use of high efficacy filters or UV light in the exhaust air ducts.
9. Annual risk assessments for TB transmission should be conducted in all dentistry settings.

Mahboobi *et al* (2010) [8] reported that Dentists have the highest risk of acquiring cross infections among the health professionals with 2.5 to 6 fold higher experience of hepatitis B among dentists. The aerosols that form in the dental clinics from both the equipment and patient sources can cause droplet infections such as tuberculosis, influenza, sudden acute respiratory syndrome (SARS) etc [9].

Fig 1

Conclusion

It would be simpler to diagnose tuberculosis if the doctor was aware of such a presentation. It would be useful if the disease could be diagnosed in its early stages, exclusively to the patient in order to allow them to obtain treatment as soon as possible, but also in preventing the sickness from spreading to others. As a result, oral clinicians can help with TB diagnosis.

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