

Treatment for 15 Cases of Cervical Tuberculosis

Min Yao¹, Zheng-Hua Zhu¹, Ning-Fang Lian², Yun-Qian Hu³, Yi Ding⁴, Jue Zhou¹, Yan Zhou¹, Laissaoui Younès⁵, Zhao-Xin Ma¹, Yang Han⁶

¹Department of Otolaryngology – Head Neck Surgery, Shanghai East Hospital, Tongji University School of Medicine, Shanghai, 200120, China

²Department of Respiratory, The First Affiliated Hospital of Fujian Medical University, Fuzhou, Fujian 350005, China

³Department of Respiratory, Shanghai East Hospital, Tongji University School of Medicine, Shanghai 200120, China

⁴Department of Ultrasonography, Shanghai East Hospital, Tongji University School of Medicine, Shanghai 200120, China

⁵Department of Otolaryngology – Face Neck Surgery, Ibnou Baja Provincial Hospital of Taza, Taza, Morocco

⁶Department of Histopathology, Shanghai East Hospital, Tongji University School of Medicine, Shanghai 200120, China

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Tuberculosis is still one of the major causes of illness and death in developing countries. Tuberculous lymphadenitis is the most common form of extrapulmonary tuberculosis. Even in the developed countries, where the disease has been controlled to a large extent, it is again posing a new health challenge due to HIV, migrants, and immunosuppressive therapy.

The present study involved 15 patients with tuberculous cervical lymphadenopathy or abscess, out of 52 patients in total with cervical lymphadenopathy or abscess, who attended the otolaryngology outpatient department of Ibnou Baja Provincial Hospital of Taza, Morocco, between April 2013 and September 2014. This local medical center caters to a population of 700,000.

After a detailed medical history had been taken along with clinical examination, excision biopsy of involved nodes was performed in patients with cervical lymphadenopathy. Biopsy of the deep cervical abscess was performed on the occasions when the cervical lymph nodes were either negative or uncertain and clinical suspicion was high for tuberculosis. Routine tests including complete blood count, erythrocyte sedimentation rate (ESR), Mantoux test (purified protein derivative skin test), chest radiography, transnasal fiberoptic laryngoscopy, cervical and abdominal ultrasound, and sputum examination for acid-fast bacilli were also performed in all of the patients. After confirmation of diagnosis, all patients were transferred to the Department of Pulmonary Tuberculosis and treated with standard chemotherapy. All of the patients were followed up at monthly intervals for at least 6 months and progress was assessed by clinical examination as well as 3-monthly ESR estimation.

Tuberculosis was the most common cause of cervical lymphadenopathy or abscess, accounting for 15 out of 52 cases. Other causes included metastatic (11 patients), nonspecific inflammation (14 patients), lymphoma (4 patients), infectious branchial cleft cysts (2 patients), or other infectious cervical cysts (6 patients).

The age of the 15 tuberculous patients ranged from 3 to 55 years with the mean age of 21 years. There were six males and nine females. Physical examination revealed multiple matted cervical nodes without chronic abscesses in seven cases, and cervical abscesses with nodes were present in five cases; in these 12 cases, lymph node excision and biopsy were needed to confirm the clinical diagnosis [Figure 1]. Deep cervical abscesses without obvious enlarged cervical lymph nodes were seen in two cases. Biopsy cytology revealed a positive diagnosis in these two cases: one patient with white rice-water-like caseous pus, and one patient with thick yellow-brown caseous pus. The wounds healed without formation of the long-term cervical fistulas after wide-bore needle aspiration and suturing. Recurrent tuberculosis with liquid discharge from a previously treated tuberculous cervical fistula was seen in 1 patient. Pharyngeal or laryngeal tuberculosis was not present in any of our cases.

After 6-month full-dose chemotherapy, all patients had a reduction in lymph node size to less than 5 mm or healed

Address for correspondence: Dr. Yang Han,
Department of Histopathology, Shanghai East Hospital, Tongji University
School of Medicine, Shanghai 200120, China
E-Mail: 66088685@qq.com

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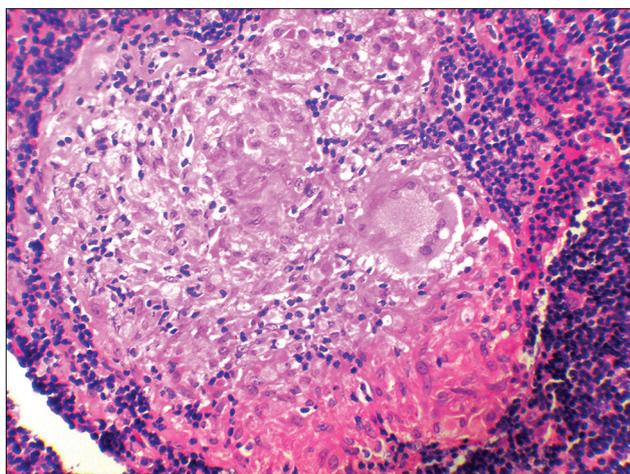


Figure 1: H and E stained pathological examination of lymph node excision biopsy. Tuberculous nodule with several central Langerhans giant cells and surrounded by epithelioid cells and abundant lymphocytes without evident central necrosis (original magnification, $\times 400$).

abscess; they had a normal ESR and were free from any constitutional symptoms.

It is known that the prevalence of tuberculosis is about 80 cases per 100,000 in Morocco and it is nearly 50 cases per 100,000 in Taza province.^[1] As a result of vaccines and variation of mycobacteria, tuberculosis has become atypical, especially extrapulmonary tuberculosis. We encountered 15 patients with cervical soft-tissue tuberculosis out of 52 patients who had cervical lymph node enlargement or chronic abscess.

The number of our cases having cervical abscess, sinus, or fistula was quite high (8 out of 15 cases, 53.3%). This finding is different from most recent studies: 5–22% of their patients at the time of presentation had an abscess or a discharging sinus. Timely consultation and diagnosis could lower the rates of tuberculous abscess and fistula.

In our study, most of the patients did not have constitutional symptoms. The most common systemic symptoms of malaise and weight loss were found in only 33.3% and 13.3% of patients, respectively. Even fewer patients had cough, fever, or hemoptysis.

We diagnosed cervical tuberculosis largely from excision biopsy and pathological examinations. In the developing countries where tuberculous infection is common and other granulomatous diseases are rare, the presence of granulomatous features on cytological pathology is highly suggestive of tuberculosis. Anti-acid stain, mycobacterial culture of excisional lymph nodes,^[2] immunohistochemistry,^[3] polymerase chain reaction, and ultrasound examination can help differentiate between granulomatous diseases. Fine-needle aspiration cytology is a diagnostic tool used in the assessment of cervical masses. However, we preferred to excise the complete lymph nodes for biopsy in cases of a suspicious tuberculous abscess with lymphadenitis [Figure 1] to avoid incision of a tuberculous

abscess and formation of a chronic fistula. In addition, we preferred excision biopsy because of the benefits of avoiding spreading infection, higher predictive value, and lower cost in rural areas. Most examining pathologists also prefer excisional biopsy of lymph nodes, rather than fine-needle aspiration, to confirm the diagnosis. Histopathological criteria for diagnosis of tuberculosis were granulomatous inflammation with caseous or coagulative necrosis.

Biopsy of a suspected tuberculous abscess should be undertaken with caution. We even sutured deep abscesses after biopsy and wide-bore needle aspiration in suspected tuberculous cases. The two wounds then healed without the formation of long-term cervical fistulas. Sometimes, a progressive abscess was subsequently treated with open drainage, or spontaneous rupture of an abscess led to inevitable fistula formation, so these cases need pathological examination and further chemotherapy. Recurrent tuberculosis with discharging pus/liquid from a previously treated cervical tuberculous fistula was diagnosed clinically in one of our patients. If the doctor in the tuberculosis department has requested pathological examinations, the otolaryngologist could also perform the biopsy in the patient.

Our study confirmed the effectiveness of pathological excision biopsy of intact cervical lymph nodes rather than fine-needle aspiration for tuberculous lymphadenitis and abscess.

Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form the patient(s) has/have given his/her/their consent for his/her/their images and other clinical information to be reported in the journal. The patients understand that their names and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

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Conflicts of interest

There are no conflicts of interest.

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