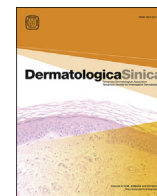


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CORRESPONDENCE

A diagnostically challenging case of tuberculous lymphadenitis



Dear Editor,

Scrofuloderma represents a direct extension to the skin of an underlying tuberculous infection of lymph nodes or bone.¹ Cervical lymphadenopathy is the most common clinical manifestation of tuberculous lymphadenitis.² Since lymphadenopathy can be attributed to multiple etiologies, including malignancy, autoimmune disease, and infection, it is often difficult to differentiate the etiology of tuberculous lymphadenitis.³

A 78-year-old Japanese woman was referred to the Department of Medical Oncology in our hospital with a 2-month history of a left cervical mass. Her medical history included atrial fibrillation, hypertension, mild renal insufficiency, and diabetes mellitus. At presentation, she was 146.2 cm tall and weighed 40.7 kg with a body mass index of 19.1 kg/m². Her body temperature was 36.9°C, and she denied experiencing chills or night sweats. Examination revealed painless swellings and lesions in the left cervical area and the supraclavicular area bilaterally (Figure 1A). The cervical lesions had formed ulcers with irregular, undermined borders. Computed tomography of the neck and chest revealed multiple enlarged lymph nodes, including in the left cervical, bilateral supraclavicular, and mediastinal regions (Figure 1B). Examination via positron emission tomography demonstrated enlargement of the left cervical, bilateral supraclavicular, and mediastinal lymph nodes. Laboratory tests revealed that her soluble interleukin-2 receptor (sIL-2R) level was 2010 U/mL (range, 124–466 U/mL). The result of the T-SPOT.TB (T cell enzyme-linked immunospot assay) test—a type of interferon- γ release assay activated by *Mycobacterium tuberculosis* antigens—yielded positive findings.

She was diagnosed with lymphadenitis on the basis of a biopsy specimen obtained from the left cervical lymph node. However, a malignancy such as malignant lymphoma, acute lymphocytic leukemia, or adult T-cell leukemia was suspected because of high sIL-2R levels.

The first skin biopsy specimen, which was taken from a sample of cervical skin, exhibited nonspecific changes, including ulceration. The smears were negative for acid-fast bacilli. The 8-week culture for *M. tuberculosis* was negative.

During Week 9 of visiting our hospital as an outpatient, we performed a second skin biopsy, which was taken from a deeper section of the cervical skin. This specimen was sent for polymerase chain reaction (PCR) testing, histology, and culture. The following day, *M. tuberculosis* was identified on PCR. Histological examination revealed tuberculous granulomata with a considerable amount of necrosis and inflammation in the dermis (Figures 1C and 1D). The 3-week culture for tuberculosis (TB) was positive, confirming the diagnosis of tuberculous lymphadenitis with scrofuloderma.

The patient was treated according to the Japanese TB guidelines: for the intensive phase of treatment, she received a 2-month course of isonicotinic acid hydrazide, rifampicin, and ethambutol hydrochloride. The continuation phase of treatment, which comprised isonicotinic acid hydrazide and rifampicin, was extended to 7 months because of her advanced age and the presence of diabetes mellitus. She did not experience any adverse effects from treatment.

High levels of sIL-2R are observed in diseases such as lymphoma, malignant tumors, hemophagocytic syndrome, interstitial pneumonia, rheumatoid arthritis, and viral infections, as well as in TB. Circulating sIL-2R is eliminated via the kidneys. This patient's creatinine level was 1.06 mg/dL (reference range, 0.4–0.7 mg/dL), and it was suspected that her sIL-2R levels were increasing in concert with declining renal function.

It is important to begin treatment with anti-TB drugs immediately after a diagnosis has been established. Culture is the definitive method for diagnosing TB, but it is time consuming. Thus, nucleic acid amplification assays (such as PCR), with their rapid turnaround time, have become the mainstream technique for diagnosing TB.³ The advent of new diagnostic techniques, in particular loop-mediated isothermal amplification, provides a means for diagnosing pulmonary TB via examination of respiratory specimens.⁴ A case of TB lymphadenitis diagnosed with a loop-mediated isothermal amplification kit using specimens obtained from the parasternocleidomastoid nodes via fine-needle aspiration has been reported.³

In the present case, the patient's cutaneous tuberculous lesion was the key to the diagnosis of TB. However, it took time before we were able to determine a definite diagnosis. She experienced severe cachexia due to her TB before receiving anti-TB chemotherapy, but recuperated after receiving TB treatment.

Conflict of interest: The authors declare that they have no financial or non-financial conflicts of interest related to the subject matter or materials discussed in this article.

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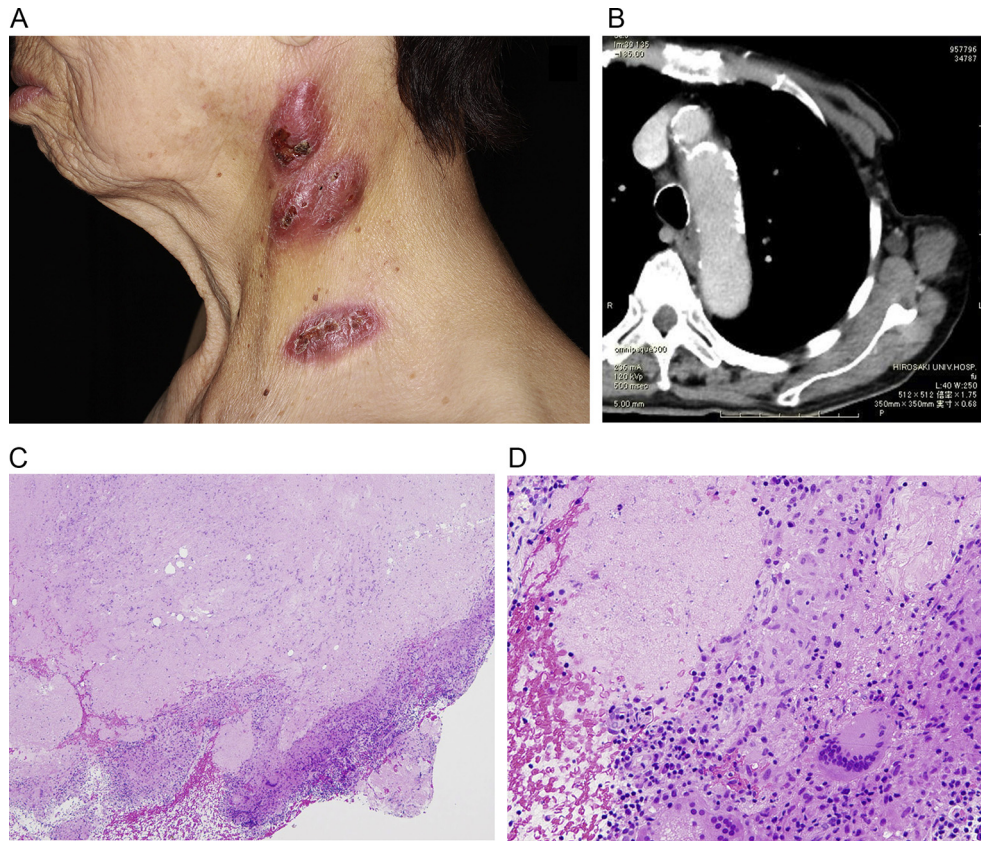


Figure 1 Clinical and radiological findings. (A) The cervical lesions formed ulcers with irregular, undermined borders. (B) Computed tomography of the chest reveals multiple enlarged lymph nodes, including mediastinal lymph nodes. (C,D) The specimen shows tuberculous granulomata with a considerable amount of necrosis and inflammatory reaction in the dermis.

Until recently, TB was considered to be a diminishing clinical problem in industrialized nations, remaining a dominant public health problem in elderly persons. Given Japan's rapidly aging society, TB is a differential diagnosis to consider for elderly persons with lymph node enlargement.

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