

CASE REPORT

THE UNCLASSICAL MANIFESTATION OF TUBERCULOSIS: MIMICKING LUNG METASTASIS AND CUTANEOUS LYMPHOMA

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ABSTRACT

Background: Lung Tuberculosis (TB) may occur with atypical presentations and radiological findings that mimic lung metastasis and cutaneous lymphoma. Diagnostic challenges for atypical TB will increase the risk of delaying proper treatment, irrational use of broad-spectrum antibiotics, and continuing transmission of *Mycobacterium tuberculosis* (Mtb).

Case: A 57-year-old woman presented with a one-year history of a chronic non-healing ulcer over the axilla and inguinal regions, along with multiple discharging sinuses and surrounding induration. The lesions were initially described as bacterial abscesses or hidradenitis suppurativa. She was repeatedly given a systemic antibiotic and a topical corticosteroid over two months. However, her condition deteriorated and was complicated by secondary infection. Xpert Mtb/RIFon sputum and pus detected rifampicin-sensitive Mtb, and a skin biopsy revealed features consistent with scrofuloderma. A diagnosis of disseminated TB was established, and she started on anti-tuberculosis treatment and showed clinical improvement after four weeks.

Discussion: The delayed diagnosis of disseminated TB mimicking lung metastasis and cutaneous lymphoma resulted in delayed treatment of anti-tuberculosis and progressive worsening of clinical symptoms. The diagnosis was made based on Xpert Mtb/RIFon sputum and pus in the wound base, thoracic CT scan, and skin biopsy. The patient was started on anti-tuberculosis therapy and showed clinical improvement after four weeks of treatment.

Conclusion: Chronic ulcers that have worsened despite systemic broad-spectrum antibiotics should be considered as cutaneous tuberculosis. Scrofuloderma, the most common cutaneous tuberculosis, is one of the markers of disseminated TB. It requires assessment to confirm pulmonary and extrapulmonary TB.

Keywords: Scrofuloderma; lung tuberculosis; disseminated tuberculosis; lung metastasis

ABSTRAK

Latar Belakang: Tuberkulosis Paru (TB) dapat muncul dengan gejala dan temuan radiologis yang tidak khas, menyerupai metastasis paru dan limfoma kulit. Tantangan diagnostik pada TB tidak khas dapat meningkatkan risiko penundaan pengobatan yang tepat, penggunaan antibiotik spektrum luas yang tidak rasional, dan penyebaran terus-menerus *Mycobacterium tuberculosis* (Mtb).

Kasus: Seorang wanita berusia 57 tahun datang dengan riwayat satu tahun ulkus kronis yang tidak sembuh di daerah ketiak dan selangkangan, disertai dengan multiple sinus yang mengeluarkan cairan dan indurasi sekitarnya. Lesi tersebut awalnya dideskripsikan sebagai abses bakteri atau hidradenitis suppurativa. Ia diberikan antibiotik sistemik dan kortikosteroid topikal secara berulang selama dua bulan. Namun, kondisinya memburuk dan disertai infeksi sekunder. Uji Xpert Mtb/RIFon pada dahak dan nanah mendeteksi Mtb yang sensitif terhadap rifampicin, dan biopsi kulit menunjukkan ciri-ciri yang konsisten dengan scrofuloderma. Diagnosis TB diseminata ditetapkan, dan ia memulai pengobatan antituberkulosis dan menunjukkan perbaikan klinis setelah empat minggu.

Diskusi: Diagnosis yang tertunda pada tuberkulosis (TB) diseminatif yang menyerupai metastasis paru dan limfoma kulit menyebabkan penundaan pengobatan antituberkulosis dan memperburuk gejala klinis secara progresif. Diagnosis ditegakkan berdasarkan hasil Xpert Mtb/RIF pada

dahak dan nanah di dasar luka, pemindaian CT toraks, dan biopsi kulit. Pasien mulai menerima terapi antituberkulosis dan menunjukkan perbaikan klinis setelah empat minggu pengobatan.

Kesimpulan: Ulkus kronis yang memburuk meskipun telah menerima antibiotik spektrum luas sistemik harus diperimbangkan sebagai tuberkulosis kulit. Scrofuloderma, bentuk tuberkulosis kulit yang paling umum, merupakan salah satu tanda tuberkulosis diseminata. Diperlukan penilaian untuk mengonfirmasi tuberkulosis paru dan ekstraparu.

Kata kunci: Scrofuloderma; tuberkulosis paru; tuberkulosis diseminata; metastasis paru

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Introduction

Tuberculosis (TB) is known as a great imitator because it can involve multiple organs and be present in various clinical presentations. Extrapulmonary TB manifestations occur in only 15–20% of patients, while cutaneous TB accounts for 1–1.5% of extrapulmonary TB and disseminated TB in 2–5% of all TB patients.¹ Scrofuloderma is the most common form of cutaneous TB and is often found in children and adolescents (10-14 years).² Lung TB may occur with atypical presentations and radiological findings, such as multiple nodules in 3.5-4.5% of immunocompetent patients, that mimic lung metastasis.³ Cutaneous lymphoma and cutaneous TB can also present similar manifestations, such as lymphadenopathy, fever, malaise, weight loss, and chronic non-healing wounds, making them challenging to differentiate and leading to misdiagnosis.³ These atypical TB manifestations will increase the risk of delayed appropriate therapy, irrational administration of broad-spectrum antibiotics, and continued transmission of *Mycobacterium tuberculosis* (*Mtb*). We report a case of disseminated TB, manifesting as scrofuloderma, multiple tuberculoma nodules, and lymphadenitis TB, in an elderly woman with atypical symptoms that mimic lung metastasis and cutaneous lymphoma.

Case Report

A 57-year-old woman presented with a one-year history of a chronic non-healing ulcer over the axilla and inguinal regions, along with multiple discharging sinuses and surrounding induration. The lesions were initially described by a general practitioner as bacterial abscesses or hidradenitis suppurativa. She was repeatedly given a systemic antibiotic and a topical corticosteroid over two months. However, her condition deteriorated and was complicated by secondary infection. She had a dry cough, low-grade fever, significant weight loss, and reduced appetite, with no history of drenching night

sweats. She had no personal or family history of hypertension, diabetes mellitus, asthma, drug allergies, malignancy, or tuberculosis treatment. Her physical examination showed a mild pallor with multiple palpable bilateral axillary lymph nodes. Vital signs were as follows: body temperature 38.0 °C, blood pressure 110/70 mmHg, heart rate 84 beats/min, respiratory rate 20/min, and oxygen saturation 97% on room air. Local examination revealed multiple chronic non-healing ulcers over the axilla and inguinal regions, along with multiple discharging sinuses and surrounding induration. (Figure 1).

Figure 1. Chronic non-healing ulcer over the axilla and inguinal

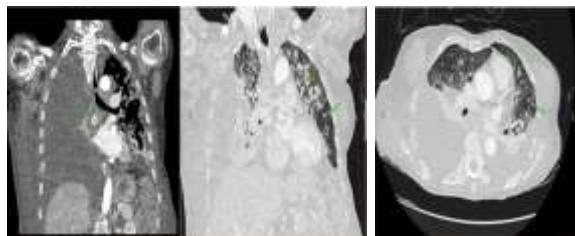


Respiratory and cardiovascular systems were normal. Laboratory examinations indicated a hemoglobin level of 8.7 g/dL, leukocyte count of 9,880/microliter, and Albumin was 1.7 g/dL (hypoalbuminemia). Serologic testing of HbsAg, Anti-HCV, and anti-HIV is non-reactive. Peripheral smear showed peripheral bicytopenia. Chest radiography showed multiple nodules that were suspected malignancy or metastatic (Figure 2), and Chest Computed Tomography (CT) shows multiple cavitary nodules (Figure 3)

Figure 2. The chest x-ray shows multiple nodular and suspected malignancies or Metastasis



Figure 3. Chest Computed Tomography (CT) shows multiple cavitary nodules.



Multiple cavitary nodules with centrilobular nodules with branching linear opacities, calcified nodules, patchy consolidation, and enlarged mediastinal lymph nodes that are partially calcified at the level of the right lower paratracheal, subcarina, left lower paratracheal, left hilar, right upper paratracheal, at the level of bilateral axilla bilateral.

Additionally, bilateral pleural effusion was thought to be secondary to hypoalbuminemia because of its similar severity. A Xpert Mtb/RIF on sputum and wound-based pus detected rifampicin-sensitive *Mtb*. Skin biopsy from the axillary wound showed a dermis composed of fibrocollagenous stroma infested with lymphocytes, and accompanied by dilated blood vessels. In the erosive area, the stroma was infiltrated with large numbers of lymphocytes, plasma cells, PMN cells, and histiocytes. No Langhans giant cells were found. There was a small area of necrosis, but no signs of malignancy were observed. A diagnosis of disseminated TB was established, and she started anti-tuberculosis treatment and showed clinical improvement after four months.

Discussion

Our case highlights the problem of delayed diagnosis because of atypical manifestations of disseminated TB (scrofuloderma, multiple

tuberculoma nodules, and lymphadenitis TB) that mimics cutaneous lymphoma and lung metastasis. Chronic non-healing ulcers with slow progression can resemble various skin conditions, including hidradenitis suppurativa, bacterial abscess, or cutaneous lymphoma (as a primary tumor in the early stages), which warrants further investigation with chest CT with contrast and skin biopsy.^{4,5} Bacterial abscesses are excluded when the lesion worsens during conservative treatment. Other than chronic non-healing ulcers, this picture shows how distinguishing pulmonary TB and lung cancer, or lung metastasis, on chest X-ray, as in this case, can be challenging due to their overlapping radiological features. Chest CT confirmed multiple nodular tuberculomas; *Mtb* was detected in both sputum and pus in the wound base, and skin biopsy revealed scrofuloderma. The clinical presentation of scrofuloderma is characterized by the appearance of nodules that gradually enlarge, fluctuate, and eventually rupture, forming ulcers that discharge a characteristic seropurulent material. These lesions are often accompanied by systemic symptoms of TB, such as fever, weight loss, and malaise.⁶

Cutaneous TB primarily affects immunosuppressed patients. However, in this case, it occurs in an immunocompetent elderly woman and highlights the importance of considering cutaneous TB in every patient who presents with slowly growing nodules that evolve into non-healing ulcers, especially in high-burden TB countries. Cutaneous TB is treated with the same regimen as Lung TB, with a combination of isoniazid, rifampicin, pyrazinamide, ethambutol, and vitamin B6 for 8 weeks, followed by a maintenance phase with isoniazid and rifampicin for 16 weeks. Clinical improvement of the skin lesions is expected between the fourth and sixth week of treatment.⁵

Conclusion

Tuberculosis may present with a variety of clinical, radiologic, and imaging

features depending on the organs involved, making TB a well-known mimicker and often leading to delayed treatment. Cutaneous tuberculosis cases may be a sign of disseminated TB and should prompt evaluation for coexisting pulmonary and extrapulmonary forms of tuberculosis.^{5,6} Our case serves as a reminder that chronic progression of non-healing ulcers may be due to scrofuloderma and that multiple tuberculoma nodules and lymphadenitis may be a focus for tuberculous infection.⁷

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