Multiple Subcutaneous Nodules and Abscessed of Both Limbs Due to *Mycobacterium haemophilum* in Uremia Patient- Case Report

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Abstract :

We report a case of multiple subcutaneous nodules and abscessed over both limbs of a 63y/o male patient suffering from uremia. In this particular case, the mycobacterium culture grew and became *Mycobacterium haemophilum* one month later. After optimal treatment, the lesions of abscesses and nodules were much improved. *Mycobacterium haemophilum* is a new emerging pathogen in the differential diagnosis for immunocompromised patients with multiple ulcerating and nodular skin lesions.

Case report :

A 63 y/o male patient has a history of uremia in ESRD with HD for 7-8 years, CHF, old MI, ischemic cardiomyopathy, PAF with pericardial effusion, OA of left shoulder, GU and DU, Multiple tophaceous gout.

3 weeks prior to admission, he suffered from both legs ulceration and abscesses formation. On the date of admission, his right leg (ankle) poor healing wound with milky-white pus-like

discharge was noted. (Picture 1) Multiple subcutaneous nodules and pustular lesions were also noted over the both legs (Picture 2, 3) . Initial impression was cellulites or gouty arthritis. But ordinary culture of pus was negative. Fungus and mycobacterium infection was highly suspected. Acid fast stain with abscess revealed two plus (++) . So we give ordinary anti-TB drugs (INH + EMB + RIF + PZA) . The lesions gradually improved. Mycobacterial culture finally grew and inevitably resulted to *Mycobacterium haemophilum* a month later. We changed anti-TB drugs with clarithromycin instead of INH . After one month course of treatment, the lesions dramatically improved. (Picture 4, 5, 6)

Discussion:

Mycobacterium.haemophilum is a fastidious (requires special growth media) mycobacterium that requires heme-supplemented culture media and low temperatures for growth. Bacterial should be incubated at 30 degrees C to 32 degrees C, two to three weeks after inoculation. The pathophysiology, natural habitat, and mechanism for acquisition of *M. haemophilum* infection are not known. Exposure to contaminated water, injections, surgical procedures, and trauma has been linked to infection with *M.haemophilum.* In a hospital in Taiwan, 12 cockroaches (Periplaneta americana) were found to be infected with the

following organisms: 4 were infected with *M. kansasii*; 3, *M. xenopi*; 2, *M. gordonae*; 1, *M. haemophilum;* 1, *M. fortuitum*; and 1, *M. avium*. Cockroaches might be implicated as a cause of hospital-acquired infections due to *M.haemophilum* in Taiwan.

The organism is now known to cause primarily cutaneous and subcutaneous infection, septic arthritis, osteomyelitis, and pneumonitis in patients who are immunologically compromised and lymphadenitis in apparently immunocompetent children. Skin manifestation is the most common presenting symptom in immunosuppressed patients. Lesions usually develop on the extremities over joints. They may begin as papules, subcutaneous nodules, scales or cysts and initially are painless but often become tender and pruritus. Differential diagnosis with subcutaneous nodules and abscess in immunocompromised patients should be kept in mind.

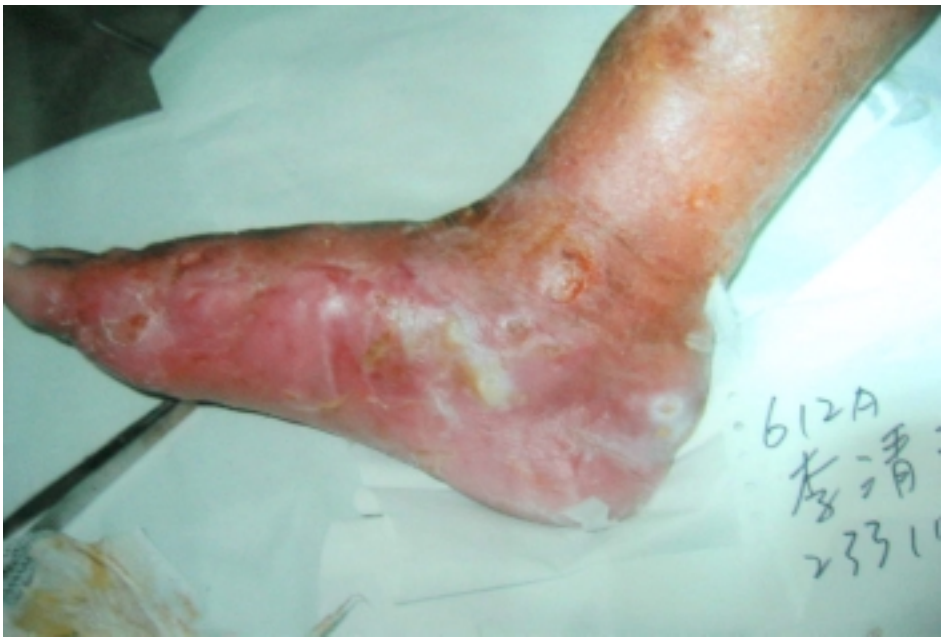
Susceptibility testing is not standardized, but *M. haemophilum* usually is susceptible to amikacin, ciprofloxacin, and other quinolones (eg, levofloxacin, clarithromycin, rifabutin, rifampin). *M. haemophilum* usually is resistant to ethambutol, ethionamide, isoniazid, and streptomycin. Although the optimal regimen is not known, combinations have had some clinical success

Conclusion

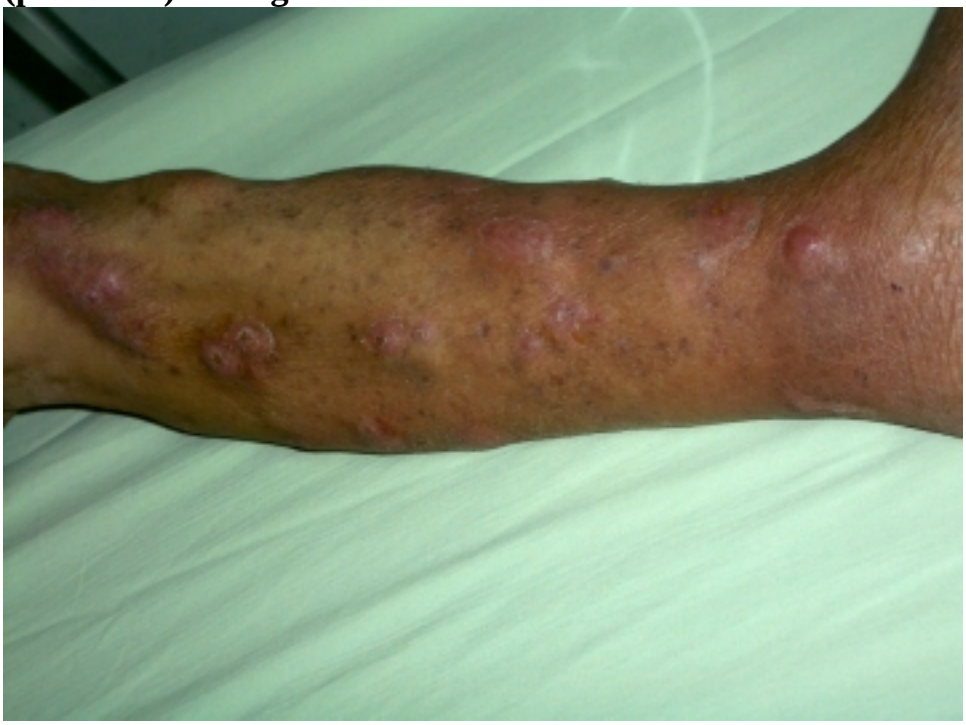
Mycobacterium haemophilum is emerging as a pathogen of immunocompromised patients particularly those with AIDS and organ transplants. Adults usually present with cutaneous manifestations, septic arthritis or occasionally pneumonia.

Accurate diagnosis is important because infections frequently respond to therapy. Increased awareness of the clinical manifestations of *M. haemophilum* infection should help clinicians identify additional cases so that therapeutic approaches can be optimized, epidemiologic studies can be done, and prevention strategies can be developed.

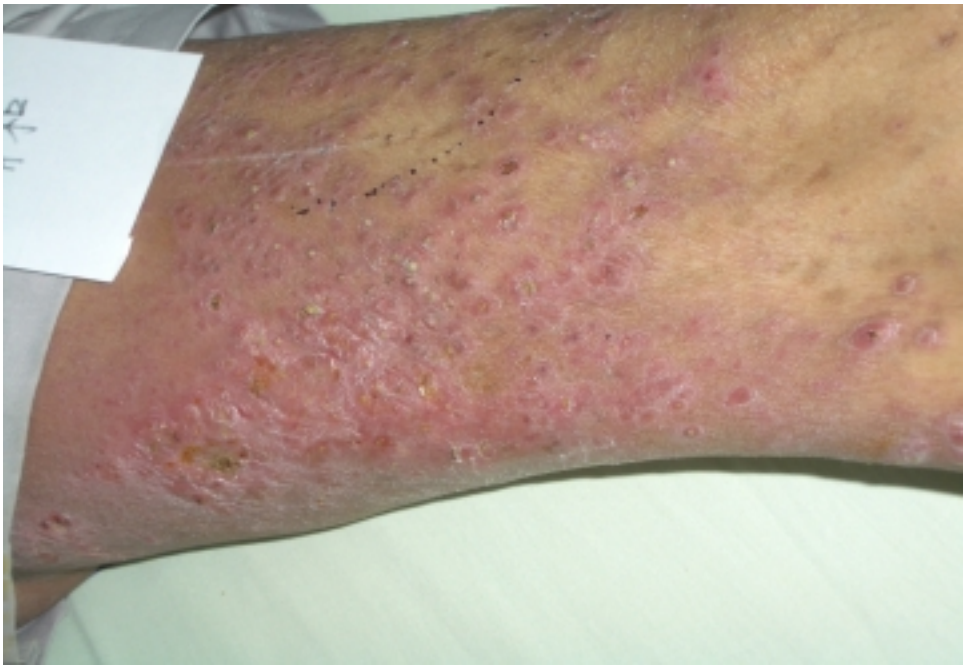
(picture 1) right ankle and leg purulent and milky-white discharge



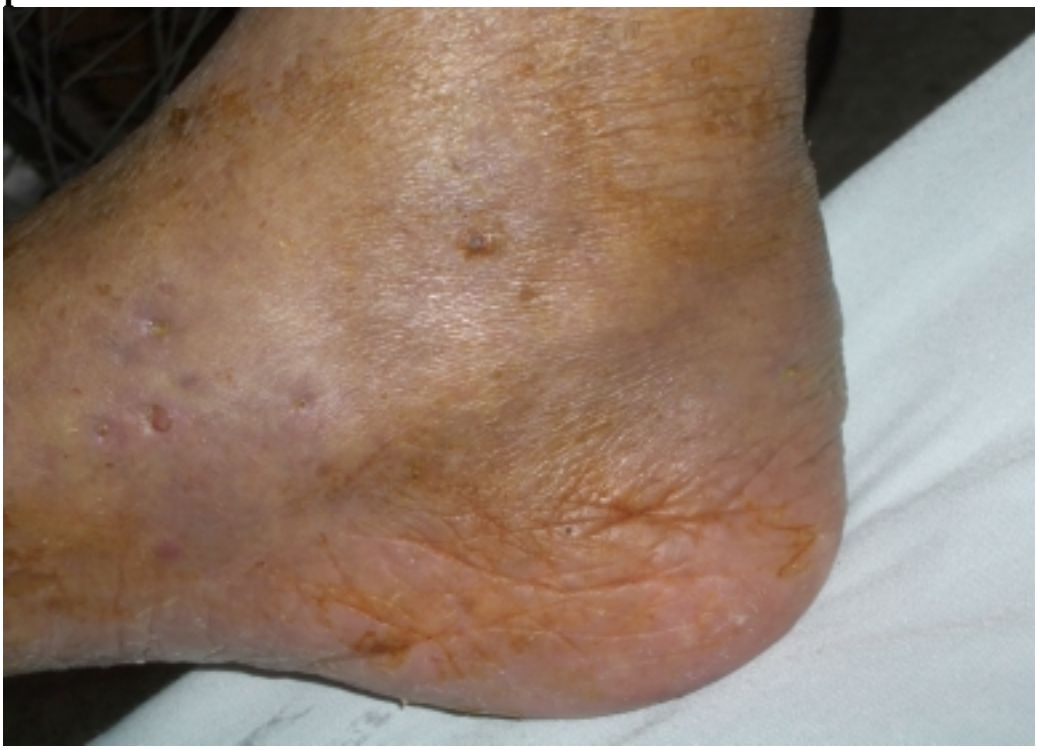
(picture 2) left leg subcutaneous nodules



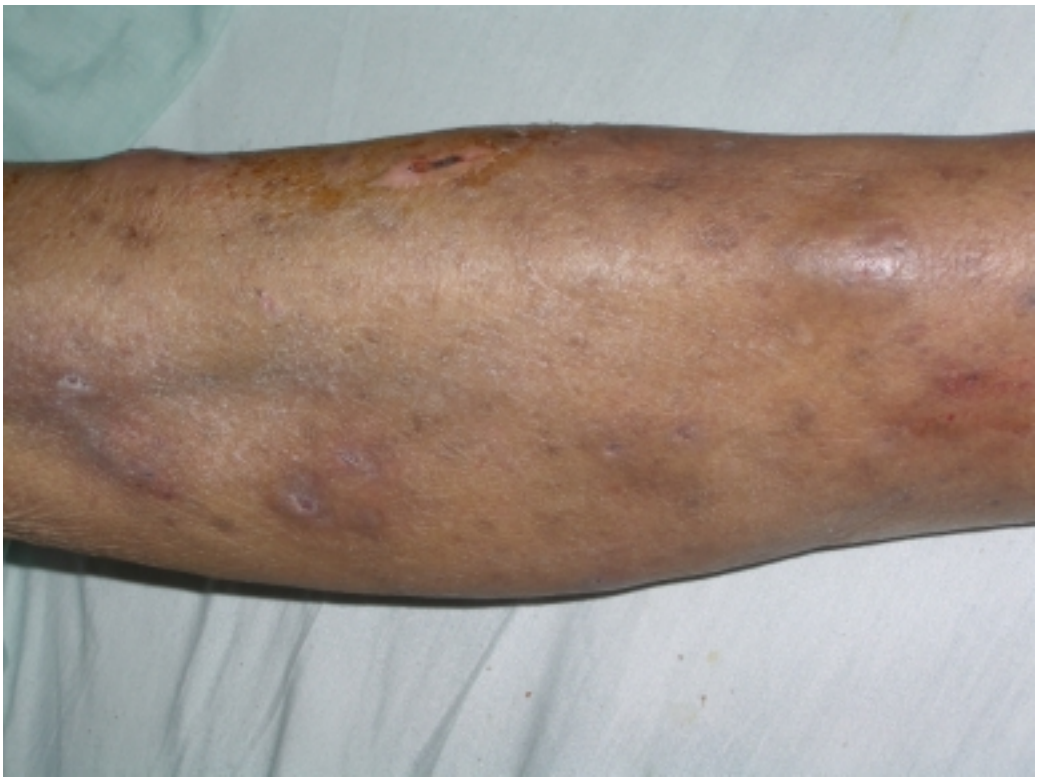
(Picture 3) left thigh pustular eruption



(Picture 4) right ankle pustular and milk-like discharge after one month post anti-TB treatment



(picture 5) left leg subcutaneous nodules improved after anti-TB treatment



(picture 6) left thigh pustular eruption after one month post anti-TB treatment