

# Massilia Timonae Wound Infection

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## Dear Editor,

*Massilia timonae* is a slowly growing gram-negative rod, and it was first described by La Scola et al in 1988 (1). Human infections caused by *M. timonae* are extremely rare, and there were less than ten cases in the literature (1-4). Therefore, the clinical significance of this pathogen remains unclear due to the limited knowledge. Herein, we reported the first case of *M. timonae* wound infection in Taiwan.

A 66-year-old woman presented with painful deformity of the right wrist after falling down on the ground. She had the medical history of coronary artery disease. Physical examination only revealed swelling, deformity, tenderness a 1.5 cm laceration wound with bone exposure

over the right wrist. Radiography of forearm disclosed a fracture of the distal radius with intra-articular involvement. Laboratory studies disclosed the following values: white blood cell count,  $6.1 \times 10^9/L$  with neutrophil predominance (59.9%); serum creatinine, 0.76 mg/dL; alanine aminotransferase, 18 U/L; sodium, 139 mmol/L; and C-reactive protein, 10.3 mg/dL (reference value, <0.8 mg/dL). Under the diagnosis right distal radius dorsal Barton's fracture, Gustilo type-2, she received emergent surgery with open reduction and internal fixation with a Kirschner wire. In the meanwhile, the wound debridement was performed and some gross turbid discharge was sent for culture during operation. Four days later, the wound specimen

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grew *M. timonae*, which was susceptible to amikacin, ceftazidime, ciprofloxacin, gentamicin, imipenem, piperacillin-tazobactam. Therefore, antibiotic was a shift to ciprofloxacin from the empirical antibiotic with cefazolin. The post-operation course was smooth, and she was discharged uneventfully. During the follow-up in the outpatient clinics, the wound healed well, and the painful sensation gradually subsided.

The bacteria which was identified by slide culture and was identified by Bruker Microflex LT MALDI-TOF MS (Bruker Daltonik GmbH) using FlexControl software with Compass Flex Series version 1.3 Software. Spectra ranging from the mass-to-charge ratio (m/z) 2,000 to 20,000 were analyzed using MALDI Biotyper automation control and the Bruker Biotyper 3.1 software and library. Identification scores of  $\geq 2.000$  indicated species-level identification, scores of 1.700 to 1.999 indicated genus-level identification, and scores of, 1.700 indicated no identification.

The present report demonstrated an unusual pathogen – *M. timonae* that caused traumatic wound infection in an immunocompetent patient. Although *M. timonae* associated human infections are rare, the clinical presentations are protean. The clinical manifestations in the previous reports include meningoencephalitis, post orthopedic surgery wound infection, lymphadenitis, osteomyelitis, and bacteremia (1-4). Here, we show another type of infection – a traumatic wound infection caused by *M. timonae*, and further expand the disease spectrum of *M. timonae* infections.

Some previous studies have demonstrated that patients with *M. timonae* infections may have some immunocompromised status – such as common variable immunodeficiency event, diabetes mellitus, or end-stage renal disease

(1,2). In contrast, some reports showed that patients with *M. timonae* infections may have no underlying medical condition, like our patient (2-4). Based on these findings, it indicates that *M. timonae* can cause human infections in both immunocompromised and immunocompetent status.

Like previous reports, it is difficult to clarify the source of infection in our case (1,3). However, several studies have demonstrated that *M. timonae* can be isolated from a different soil sample in China and suggested that *Massilia* species may be an environmental organism (5). Therefore, the possible explanation for the source of infection may be while the patient fell down on the ground and thus get the infection after the traumatic wound exposure to the soil.

In conclusion, we describe the first case of traumatic wound infection caused by *M. timonae* in an immunocompetent patient in Taiwan, and the clinical condition responded well to the antibiotic and wound debridement. The present case helps us better understand the clinical significance of this rare pathogen.

## Conflict of Interests

The authors declare that they have no conflict of interest in the letter.

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