SRYAHWA PUBLICATIONS

Archives of Dermatology and Skin Care
ISSN: 2638-4914 | Volume 7, Issue 1, 2025
https://doi.org/10.22259/2638-4914.0701003

CASE REPORT

# Erysipeloid: A Rare Entity of Acute Non-Necrotizing Bacterial Dermohypodermitis, Case Report

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Received: 09 March 2025 Accepted: 24 March 2025 Published: 26 March 2025
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## Abstract

Erysipeloid is a professional cutaneous infection caused by the traumatic penetration of Erysipelothrix rhusiopathiae. Clinically, the disease is characterized by erythematous edema with well-defined, raised edges, usually localized on the back of a hand and/or fingers. Vesicular, bullous, and erosive lesions may also be present. The lesion can be asymptomatic or associated with mild itching, pain, and fever. It was a 38-year-old female fishmonger from Benin, with a history of penicillin allergy manifesting as urticaria, who consulted the Buruli Ulcer Screening and Treatment Center in Allada for tissue loss evolving over the past 7 days, following a microtrauma from the fin of a tilapia fish. She initially treated it with ice. The onset of pain 24 hours later, along with swelling of the right hand, led the patient to self- medicate with ibuprofen and topical phytotherapy, resulting in transient improvement. On examination, an oval-shaped ulcer measuring approximately 2 cm in diameter and 0.5 cm in depth was noted, with an erythematous, oozing base, secreting a cloudy liquid with crusty edges and well-defined borders. The perilesional skin was infiltrated in some areas with a firm consistency. There was the presence of an inflammatory axillary lymphadenopathy measuring 6x4 cm in diameter. The diagnosis of erysipeloid of the right hand was established. The patient received treatment consisting of ciprofloxacin, metronidazole, an analgesic, and daily dressings. The progression under this treatment was favorable, with significant improvement after 15 days. Erysipeloid is an infection whose onset may seem trivial or even harmless to the patient. However, the complications are often fatal. This highlights the importance of prevention, such as wearing household gloves for those exposed to high-risk occupations.

**Keywords:** Erysipeloid, Dermohypodermitis, Case.

## 1. Introduction

Erysipeloid is a professional cutaneous infection caused by the traumatic penetration of *Erysipelothrix rhusiopathiae*. Clinically, the disease is characterized by erythematous edema with well-defined, raised edges, usually localized on the back of a hand and/or fingers. Vesicular, bullous, and erosive lesions may also be present. The lesion can be asymptomatic or associated with mild itching, pain, and fever [1]. In addition to skin infection, *E. rhusiopathiae* can cause endocarditis, which may be acute or subacute. Endocarditis is rare and has a male predilection. It generally occurs in previously damaged valves, primarily the aortic valve. Erysipeloid may be confused with "seal's finger," but this disease likely has a different microbial etiology and requires different antibiotic treatment [2,3]. We report a case of erysipeloid in a 38-year-old patient.

## 2. Observation

It was a 38-year-old female fishmonger from Benin, with a history of penicillin allergy manifesting as urticaria, who consulted the Buruli Ulcer Screening and Treatment Center in Allada for tissue loss evolving

**Citation**: Pierre Kitha, Fabrice Akpadjan, Nadia Ntouala, *et al.* Erysipeloid: A Rare Entity of Acute Non-Necrotizing Bacterial Dermohypodermitis, Case Report . Archives of Dermatology and Skin Care. 2025;7(1):10-12.

over the past 7 days, following a microtrauma from the fin of a tilapia fish. She initially treated it with ice. The onset of pain 24 hours later, along with swelling of the right hand, led the patient to self-medicate with ibuprofen and topicalphytotherapy, resulting in transient improvement. The persistence of swelling and exacerbation of pain 5 days later prompted her consultation.

On examination, an oval-shaped ulcer measuring approximately 2 cm in diameter and 0.5 cm in depth was noted, with an erythematous, oozing base, secreting a cloudy liquid with crusty edges and well-defined borders. The perilesional skin was infiltrated in some areas with a firm consistency. There was the presence of an inflammatory axillary lymphadenopathy measuring 6x4 cm in diameter. This lesion was located on the palm of the right hand. (Figures 1 and 2)

**Figure 1.** *Erosive, crusty medallion on a suppurative base on the palm of the right hand.*

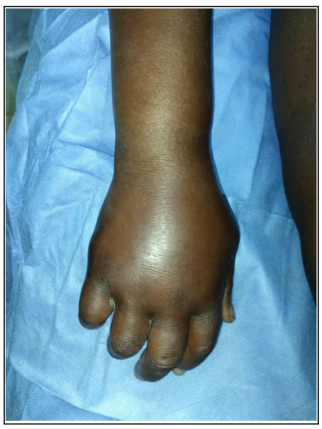

**Figure 2.** *Edematous infiltrated plaque on the back of the right hand.*

The complete blood count, HIV retroviral serology, and blood glucose levels all returned normal. The diagnosis of erysipeloid of the right hand was established. The patient received treatment consisting of ciprofloxacin, metronidazole, an analgesic, and daily dressings. The progression under this treatment was favorable, with significant improvement after 15 days.

## 3. Argument

The typical cutaneous lesion is an erythematous macule, usually localized at the site of inoculation, typically at the extremities, which regresses rapidly and spontaneously [4]. *Erysipelothrix rhusiopathiae* is a small, Gram-positive, facultative bacillus, non-sporulating, and non-acid-fast. It was identified as a human pathogen at the end of the 19th century. There are three clinical forms of this disease: a localized cutaneous lesion (erysipeloid), a generalized cutaneous form, and a septicemic form, often associated with endocarditis. This infection has a mortality rate of 40% and high morbidity. The microbiological diagnosis must consider the possibility of error, as isolating a Gram-positive bacillus could represent contamination by a clinically irrelevant agent [3,5].

The risk factor in our patient was her occupation. The bacterium is described in fish fins. The time that passed between the trauma and the consultation is a crucial factor in explaining the virulence of the bacterium in her case. Although she presented with the localized form of the disease, it is essential to always consider

the potential complications, which are often fatal when endocarditis or septicemia develops. This condition, like non-necrotizing bacterial dermohypodermitis, is a medical emergency. Penicillin, ciprofloxacin, and clindamycin are antibiotics available to treat this condition.

## 4. Conclusion

Erysipeloid is an infection whose onset may seem trivial or even harmless to the patient. However, the complications are often fatal. This highlights the importance of prevention, such as wearing household gloves for those exposed to high-risk occupations.

**Conflicts of Interest**

None

## 5. References

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