

# Acute Forefoot Phlegmon – A Complication of Intravenous Heroin-Addiction

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## Abstract

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Infections of the skin and soft tissues (SSTI) are clinical entities with variable presentations, causes, and levels of clinical severity. They are frequent in emergency departments. The most common pathogen in the Western World is *Staphylococcus aureus*. SSTI may provide a hint to underlying pathologies such as diabetes and other states of immune compromise. Here we present a 41-year-old non-diabetic male patient with pain and swelling of the left forefoot but not any recent trauma. Microbiology identified streptococci. The medical history was positive for intravenous heroin abuse. The diagnosis of forefoot phlegm due to drug addiction was confirmed. Treatment was realised by a combination of intravenous antibiotics and drainage. Intravenous drug addiction is a significant risk factor for SSTI.

## Introduction

In the Western World, diabetic foot is the leading cause of soft tissue infections of the forefoot. The most common pathogens are bacteria, but mycotic and viral infections are also possible. SSTI of the forefoot ranges from superficial to deep infections to necrotising fasciitis. SSTI cause annually about 850 000 hospitalizations in the US [1][2][3][4].

## Case Report

A 41-year-old male patient presented to the emergency department. He reported pain and swelling

in the left forefoot but denied any recent trauma. He had slightly increased the peripheral temperature of 37.6<sup>0</sup> Celsius. On examination, we observed swelling of the forefoot with an injection mark but without sharply demarcated erythema (Fig. 1). He had small erosion on the lateral part of his Vth toe. On demand, he mentioned an earlier self-injection of heroin on both sites. There was no discharge from the wounds. The lymph nodes in the left groin were palpable and painful. Laboratory investigations revealed an elevated C-reactive protein of 65 mg/L (normal range < 5 mg/L) and an increased leukocyte count of 63 Gpt/L. A microbial swab was positive for streptococcal spp. Magnetic resonance tomography excluded the involvement of fascia, muscles and bone. He was submitted to the Department of Orthopedic Surgery. Treatment was realised by a combination of intravenous cefuroxime 2 x 1.5 g for ten days and drainage. Healing was complete.



Figure 1: Forefoot phlegmon due to intravenous heroin use, small erosion on the Vth toe

## Discussion

Intravenous drug addiction is a significant risk factor for SSTI. The presentation of intravenous heroin users to emergency departments is significantly above average [5][6]. Skin and soft tissue infections (SSTI) are the most common cause of hospital admission of injection drug users. Abscesses are the most frequent type of SSTI. Wound infections with rather unusual germs like *Clostridium* (C.) botulinum, *C. novyi*, tetanus or anthrax have been observed in heroin injectors, especially after subcutaneous or intramuscular injection of heroin ("skin popping") [7][8][9].

In the present case, neither abscess formation and nor erysipelas (cellulitis) was noted but a forefoot phlegmon due to streptococcal infection. The disease was treated with intravenous antibiotics with drainage. Complete healing was achieved.

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