

## Unexpected Guest on Fournier's Gangrene

### Fournier Gangreni Üzerinde Davetsiz Misafir

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#### ABSTRACT

Myiasis is more common in tropical and subtropical climate regions. However, it has been reported that myiasis has increased in number due to travel has become easier, business and touristic visits have increased. A 60-year-old male patient had Fournier's gangrene and had many fly larvae on the necrotic tissue of scrotum and perineum. The patient underwent emergent operation for debridement. The necrotic tissue was debrided and wound was closed with vacuum assisted closing. In this case report, we aim to present diagnosis and treatment of a case of myiasis developed on the Fournier's gangrene.

**Key Words:** Fournier, gangrene, myiasis, vacuum assisted closing

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#### ÖZET

Miyaz, tropikal ve subtropikal iklim bölgelerinde daha sık görülür. Bununla birlikte, seyahatin kolaylaşması, ticaret ve turistik ziyaretlerin artması nedeniyle miyaz sıklığının arttığı bildirilmiştir. 60 yaşında erkek hasta, skrotumun çoğunu kaplayan ve perineye uzanan Fournier gangreni tanısı aldı. Nekrotik dokuda birçok sinek larvası vardı. Hasta debridman için acil operasyona alındı. Nekrotik doku debride edildi ve yara vakum destekli kapatma ile kapatıldı. Bu olgu sunumunda, Fournier gangreninde gelişen bir miyaz olgusunun tanı ve tedavisini sunmayı amaçladık.

**Anahtar Sözcükler:** Fournier, gangren, miyaz, vakum destekli kapama

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#### INTRODUCTION

Myiasis is a disease characterized by invasion of human tissues by fly larvae which need parasitic feeding to complete their evolution. After the eggs are left into the wound, the larva by reaching the third stage becomes visible on the surface of skin. Fournier's gangrene (FG) is a type of necrotizing fasciitis or gangrene affecting the external genitalia, scrotum and/or perineum. In this article, we aim to present a case of myiasis developed on the FG and draw attention to this subject.

#### CASE REPORT

A 60-year-old male patient was admitted to the emergency room with a complaint of scrotal and perineal pain which was lasting for five days. Except for uncontrolled type-2 diabetes, his medical history was unremarkable. The patient stated that he had recently been in his hometown, which was a small village outside of the city. Physical examination revealed a FG with many fly larvae on the necrotic tissue of scrotum and perineum (Figure 1). Leukocyte count was 11640 / mm<sup>3</sup>, fasting blood glucose was 551 mg / dL and C-reactive protein was 40 mg/dL.

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The patient underwent emergent operation for debridement after achieving glycemic control. After spinal anesthesia, lidocaine was injected into the wound to separate the larva from the necrotic tissue. The necrotic tissue was debrided and operation lodge was washed with hydrogen peroxide solution and saline. The wound was closed with vacuum assisted closing (V.A.C.). Broad spectrum antibiotics were administered and blood glucose was regulated. Over the next 25 days, debridement and V.A.C. treatment were performed seven more times. No recurrence of myiasis was observed during hospitalization period. Twenty-five days after the first debridement, the wound was closed with skin grafts and fasciocutaneous flaps by plastic aesthetic and reconstructive surgery clinic. Neither recurrence nor complication was observed during six months follow-up. Informed consent was obtained from the patient.



**Figure 1:** Larvae on Fournier's gangrene of the scrotum and perineum.

## DISCUSSION

Myiasis is more common in tropical and subtropical climate regions (1). However, it has been reported that myiasis has increased in number since travel has become easier, business and touristic visits have increased. Myiasis is the fifth most common (8-11%) dermatologic disease (2). Poor hygiene, low socioeconomic status, contact with animals, advanced age, mental retardation, wounds and systemic diseases are risk factors (3).

Myiasis is named according to the affected area in the body. It may be dermal, ophthalmic, nasopharyngeal, enteric, auricular, oral and urogenital. The most common type is dermal myiasis (4). Furuncular, migratory and wound myiasis are the subunits of the dermal myiasis. *D. hominis* and *Cordilobia* are the most common microorganisms in dermal myiasis (5). Neuropathic ulcers, psoriasis, seborrhoeic keratosis, onychomycosis, skin lymphoma, basal cell carcinoma, herpes zoster infection, leprosy and impetigo increase the risk of myiasis (1). In the presented case, myiasis was observed on necrotic tissue in a patient with FG.

Although accurate prevention of myiasis is still absent, some simple precautions were suggested to prevent infestations of fly larvae. Washing and ironing clothes, making personal hygiene better, avoiding sleeping outside and on the floor, using insecticides and storing foods to keep away the flies from living areas may help to avoid myiasis (6). Our patient had predisposing factors for myiasis such as uncontrolled diabetes, advanced age and a history of visiting a village which has more possibility for animal contact and poor sanitation.

In literature, chloroform, dichlorotetrafluoroethane, ivermectin and lidocaine were recommended to remove larva from the affected tissue. Debridement of necrotic tissue and daily wound dressing were suggested for treatment (7). In the presenting case, lidocaine was applied for removing larvae, and wound dressing by V.A.C. was performed.

## CONCLUSION

Myiasis is not a common disease for clinicians to face with in daily practise. Patients with advanced age, chronic disease or poor hygiene have higher risk. Clinicians should be aware of myiasis especially on wounds in risky patients. Taking detailed medical history and inspection of the area of complaint are adequate for prompt diagnosis. In addition, in myiasis cases related to Fournier's gangrene, we believe frequent periods of debridements and V.A.C. wound dressing will be beneficial both in preventing the recurrence of myiasis by creating an anaerobic environment and in increasing wound healing.

## Conflict of interest

No conflict of interest was declared by the authors.

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