Case report

A case of Fournier's gangrene: an insidious and dangerous pathology

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Abstract. Fournier's Gangrene is a rare form of necrotizing fasciitis due to microbial infection of perineum and scrotum. It's a sever infectious disease with an high mortality rate: an early and aggressive debridement is a significant prognostic factor in the management of this pathology. We present a clinical case of a 52-years old male patient that suffered from this disease after a long car journey that may have favoured the maceration of skin with the following penetration and proliferation of microbes into the scrotal skin. Subsequently he developed fever, not adequately considered, and this leads to development of sepsis that required hospitalization in Resuscitation and Intensive Care Unit, then in Infectious Disease Ward, and finally he was placed under our care so that he could undergo procedures of reconstruction of scrotum and reparation of the cutaneous defect. (www.actabiomedica.it)

Key words: Fournier, fasciitis, perineum, scrotum, microbe, necrosis

Introduction

Fournier's gangrene is a rare clinical condition which was first described in 1025 by the acclaimed doctor Avicenna and then in 1764 by Baurienne, but was named after the French dermatologist Jean-Alfred Fournier who presented a clinical case during one of his lessons in 1833.

It is a necrotizing fasciitis caused by both aerobic and anaerobic bacteria that lead to the loss of skin and subcutaneous tissue, and the main predisposing factors seem to be the presence of diabetes, colon-rectal cancer and fistula, uro-genital malformations, ethylism, malnutrition, immunosuppression, low social-economic status and poor hygiene; however, there have also been cases of this after surgical interventions such as vasectomy in patients without apparent predisposing factors.

Fournier's gangrene can affect the perineum, scrotum and abdominal wall, but structures with vascularization like the testes or the rectum are usually spared.

This pathology has a high mortality rate even with prompt surgical therapy and long-term antibiotic therapy.

Case report

We report the case of a male patient, aged 52, affected by Fournier's disease with complete exposure of both testes due to cutaneous necrosis of about 4/5 of the scrotum, gravely retracted on 3 sides: at the top and in the inguinal region.

The patient was not diabetic, but remote pathologic anamnesis revealed acute myocardial infarction 3 years previously, and he had suffered depression for 10 years which was treated with pharmacological therapy.

Work anamnesis also revealed that the patient travelled long distances in his car, and when he re-

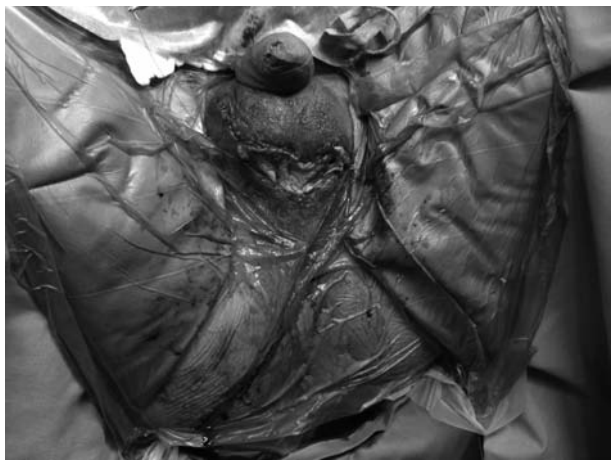

Figure 1. Fournier's gangrene: scrotum reconstruction

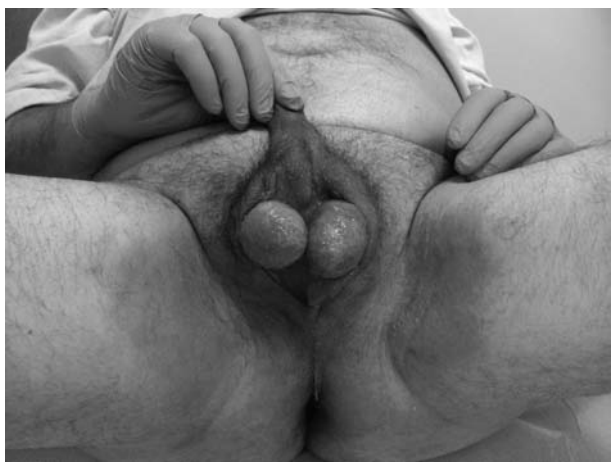

Figure 2. Fournier's gangrene

turned after a 2-day journey in the Spring, when there was a significant increase in environmental temperature, he was hyperpyretic. During initial PS observation, instrumental tests revealed air in the scrotal tissue; within 24 hours, however, he returned to the hospital where he was sent to the Resuscitation Unit with the diagnosis of septic shock. He depended on mechanical ventilation for a week, and required prolonged intensive and antimicrobial therapy. The microbial agents identified were enterobacteriaceae.

For the post-intensive period he was sent to an infection ward and then discharged and treated as an outpatient while awaiting plastic and reconstructive surgery.

The patient was taken in after more than 20 days in hospital, with stabilised lesions; his testes were completely exposed, without scrotal cover.

Discussion

The patient was first operated on 40 days after the acute event to reconstruct the scrotal sac and to fully cover the cutaneous defect: after careful surgical cleaning of the affected area, the residual scrotal folds were detached, hardened, introflexed and allowed to heal in the intimate layer. Liberation from the fibrotic tissue permitted coverage of 2/3rds of both the testes, completed for the 3rd lower area, proximal to the perineum, using a complete cutaneous autograft from the left arm.

After 50 days, the patient was given further surgery for definitive correction of a small residual ulcer on the perineal raphe of high infective risk due to the high summer temperatures at the time.

Conclusions

Three months after the acute episode of septic shock, the patient completed his course of treatment. The reconstruction of the scrotum was complete, his sexual performance was satisfactory and he could return to work with care, following a gradual path of recovery.

The case emphasises the importance of fast diagnosis and prompt treatment to rehabilitate people who suffer from this serious disease which is still not fully understood.

To be highlighted is the role of the many predisposing factors for the intrusion and proliferation of germs, such as mechanical compression and high temperatures, which not only result in a deficit in scrotal perfusion but also render the tissue ischemic and macerated and particularly vulnerable to infection by germs in the nearby enteric tract.

Because the pathology occurred within the context of work – a long car journey which caused the occurrence of fasciitis – we wonder whether this instance of Fournier's Gangrene could be considered a work-related incident.

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