



## Review on Necrotizing Fasciitis: A Rare Flesh Eating Disease

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### Abstract

Necrotizing Fasciitis is a rare disease that is often called as the Flesh Eating Disease, which leads to the damage of the body's soft tissue which is said to be as fascia. It is a severe cause which includes the severe body pain, itching, fever and vomiting. Most probable body parts which are likely to be get affected by fasciitis is perineum and limbs.

The probability of getting affected by this disease is more in the people with diabetes, cancer, alcoholism, obesity and elderly patients. This disease will not get affected from one to one by contact or by through any other mode as it is not an air-borne. In the initial stages of the fasciitis, the signs and symptoms will be like swelling in the soft tissues, discoloration in the skin, blisters, furthermore all this things will happen in the initial hours, where the redness of skin will takes place and there on subsequent necrosis will occur within the subcutaneous tissue. The major causing organism for this disease is MRSA (Methicillin-resistant *Staphylococcus aureus*) and may cause by the other bacteria too. Major types of Type 1 (necrotizing fasciitis are polymicrobial), Type 2 (streptococcal MRSA group), Type 3 (gas gangrene), and others like marine organisms (candida and zygomycetes).

**Keywords:** Gas gangrene, MRSA, Necrosis, Air-borne

### Introduction

In every year the cases of necrotizing fasciitis are increased worldwide, about 600-700 patients are diagnosed in the United States and out of these 25%-35% cases are leading to death. Bacteria may enter into the body by various source or injuries such as cuts, bites and abrasions [1-9]. Major causative bacteria is said to be the group A Streptococcus (GAS) bacteria [2,10-14]. Often the symptoms will show within 24 hours of the infection, symptoms are likely to be as increasing pain, redness and warmth around the wound, flu like symptoms such as diarrhea, nausea, fever, dizziness, and thirst causing due to dehydration.

### Symptoms

Symptoms are often more confusing and unimagined where illness is the major symptom, pulled muscle is said to be observed in some people and skin will become red as the areas will become swollen where it spread easily [15-21]. The

chances of ulceration, severe pain in the muscles associated with fever. Probability of severe pain will be at the wounds of the affected area [5,22-26].

### **Treatment**

Immediate treatment is required as the first line antibiotics are suggested; the strong antibiotics given through a vein but because of the bacterial toxins may decay or destroy the soft tissue and there by reduces the blood flow [4,27-34], in addition to this surgical exploration is much needed for the early recovery or to eradicate the severe pain [35-38].

### **Cause**

Hands and legs are severely affected with the necrotizing fasciitis as this leads to the death, the primary detection and first line treatment is mandatory [39-45]. In 1883 Joseph Jones, a Confederate Army surgeon, during the US Civil War first described the Necrotizing fasciitis. In the year 2010, a group of scientists and surgeons from Portland, Oregon, wrote the collective review on the first line treatment and diagnosis [10,12,46-55]. In 2011, Dr. Rausch and Dr. Foca made a documented report and ended with the statement of “early diagnosis of this disease will be the lifesaving”

A foundation has started in the name of [National Necrotizing Fasciitis Foundation](#) (NFFF) by the fasciitis survivors by name Donna and Jackie <sup>[56-67]</sup>. In the past 16 years, these two persons have united as leaders in the society <sup>[68-74]</sup>, worked diligently in the volunteer staff for the foundation mission to bring out the awareness about necrotizing fasciitis, and to save the lives from misdiagnosing.

### **Diagnosis and Treatment**

This disease is similar to the gangrene that is affected with myeloproliferative neoplasms (MPNs) and is more resembled with the cellulitis in external <sup>[75-82]</sup>. [Borja Apellaniz Aguirre](#) has written an article in the [Journal of Infectious Diseases & Therapy](#) on the programming of early diagnosis of fasciitis from an unknown origin. Facial necrosis goes before muscle and skin contribution, consequently its namesake <sup>[83-88]</sup>. The average death rate is 25%-30% over 70% of cases are related with poisonous stun disorder. The living organism identified with NF are gathering A [beta-hemolytic Streptococci](#) (type II NF), with or without staphylococcal contamination.

The investigation of extracellular proteins that assume a part in the pathogenesis of GAS and known as "streptococcal pyrogenic poisons" utilizing PCR system demonstrated that they were not uniformly circulated among the GAS bringing on various sorts of malady. Subsequently a few atomic writing frameworks have been presented and detailed as option apparatuses. Serotyping of GAS in view of protein M, a noteworthy surface destructiveness calculate, has for some time been utilized as the best quality level for the epidemiological reconnaissance of the diseases created by this pathogen <sup>[6-8,89-92]</sup>. As of late it has been broadly supplanted by comparable methods in light of sequencing the hyper variable area of the emm quality encoding the M protein. Another author [Mona Z Zaghloul](#) has elaborated the post effects of Tropical Medicine & Surgery, in the [Journal of Tropical Medicine & Surgery](#) with his editorial work on fasciitis. Early restorative treatment is regularly hypothetical in this manner where anti-toxins ought to be begun when this condition is suspected. Beginning treatment regularly incorporates a mix of intravenous anti-infection agents including piperacillin/tazobactam, vancomycin, and clindamycin <sup>[93-96]</sup>. Societies are taken to decide proper anti-infection scope, and anti-infection agents might be changed when culture results were obtained.



**Figure 1:** Leg affected with Necrotizing Fasciitis.

[Clinical and Experimental Dermatology](#) conference is going to held on June 19-20, 2017 in Philadelphia, USA, with the theme of “The Skin - Interface with the World” and this will help out in endeavoring the new emerging practices in the dermatology and plastic surgery, In the early stages it may appear as cellulitis, and later by spreading onto the external tissues of the skin. 23<sup>rd</sup> [Asia-Pacific Dermatology Conference](#) is to be held in Osaka, Japan, which will aim for “Exploring the prior Possibilities in Dermatology”. The global market analysis of this conference is said to be the high and varied about to get the major speakers and presenters from USA and Philippines. [Kim Alexander Papp](#), who is an eminent speaker from Probity Medical Research, Canada and he presented on the *Androctonus bicolor* scorpion venom inhibits 7,12-Dimethylbenz[a]anthracene initiated and croton oil along with the [Sven Richter](#) <sup>[97-99]</sup>, evaluated the skin cancer in mice.

[Dermatology Associates of SEATTLE](#) is promoting the specialties such as novel treatments like acupuncture, and other innovative treatments in the dermatology. [Dermatology Associates, P.S.C.](#) has served the Greater Louisville community for over 25 years and is located at east end of Louisville, DA PSC is a fully service dermatology practice center which is dedicated to provide the solutions for all of your skin care needs <sup>[6]</sup>.

[Dermatology Associates](#) is one of the largest dermatology practice plot in Northern New England. They are committed to give the best and most innovative clinical and skin care in surgical to all varied ages in a convenient and patient-friendly environment <sup>[100]</sup>.

### **Conclusion**

Cellulitis and Necrotizing fasciitis is very much similar in the external appearance, and both are similar in morphology, where cellulitis is serious bacterial infection where it can be treated with the specialized physicians, the causative organism is *Staphylococcus*, probability is more at the legs and arms. Necrotizing fasciitis is said to be the severe life threatening disease which needs the grafting of the skin and may affect any of the body parts. Evaluated first line treatment with antibiotics will prevent from severe infections of the body. Much severe attention is needed at the minor cuts, insect bites; incisions of surgeries are major common sites of the infection.

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