



CASE REPORT ON NECROTIZING FASCIITIS

Araveti Lokesh¹, Vatam Sivaranjani^{1*}, Sangaraju Vijayalakshmi¹, Shaik Lahoor Basha² and M. Venkata Subbaiah³

^{1,2}Pharm-D, P. Rami Reddy Memorial College of Pharmacy (Prmcp), Kadapa, Andhra Pradesh, India-516003.

³Assistant Professor, P. Rami Reddy Memorial College of Pharmacy (Prmcp), Kadapa, Andhra Pradesh, India-516003.

***Corresponding Author: Vatam Sivaranjani**

Pharm-D, P. Rami Reddy Memorial College of Pharmacy (Prmcp), Kadapa, Andhra Pradesh, India-516003.

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ABSTRACT

Necrotizing fasciitis is a necrotizing soft tissue bacterial infection of the muscle fascia and subcutaneous fat, is a rare life threatening infection commonly known as “flesh eating disease” affects 0.4 to 1 person per 100,000 per year of both sexes equally. In as many as two thirds of the cases the primary sites of involvement are extremities that threaten both the patient’s limb and life. It is characterized by red or purple skin in the affected area, severe pain, fever and vomiting. It can be easily mistaken for cellulites. Treatment involves broad-spectrum antibiotics and multiple surgical debridements or amputation. Here we present an issue of a 67 years male patient who got admitted in the hospital with the complaints of fever, vomiting and swelling of right leg since 3 days associated with pain, tingling and prickling sensation present. He mentioned trauma to his right leg 10 days back and used home remedies as the wound was spreading to the entire leg he visited our hospital. On general examination the patient was conscious and cooperative, on physical examination swelling, erythema present and was tender and sensitive to touch. His vital signs temperature -101°F, PR-100 bpm which were found to be slightly increased and BP-110/60mmHg found to be slightly decreased later he was referred for some lab investigations which shows decreased Hb – 11gm/dl and increased WBC-13000 cells/cumm, N -80% and ESR – 20Hr/mm. He was diagnosed with necrotizing fasciitis to treat this intravenous antibiotic therapy and surgically radical debridement was done.

KEYWORDS: Necrotizing fasciitis, Antibiotic therapy, radical debridement.

INTRODUCTION

Necrotizing fasciitis is known by the more sensational term – ‘flesh eating bacteria syndrome’ which is uncommon or rare.^[1] The incidence of this type of infection has been estimated to be around 4 per million of the population and it has increased over the last decade.^[4] It is described by rapidly spreading inflammation and necrosis of the skin, subcutaneous fat and fascial plane, due to its relatively poor blood supply. It can be easily mistaken for cellulites in the early stages of its development. The principal feature of necrotizing fasciitis is pain that is unsymmetrical to physical findings and pain that is exceeding the areas of erythema and edema. Necrotizing fasciitis is a medical crisis that jeopardizes both the patient’s limb and life. Even with the treatment the mortality rate of necrotizing fasciitis is high, at about 30%. The indigenous history of this necrotizing infection without intervention almost always leads to death.^[1] The diagnosis of necrotizing fasciitis is based on the clinical presentation that is the appearance of the skin, extreme pain, fever and systemic features. Laboratory, radiological, and histological investigations can prosper in the diagnosis. Usually, the hematological profile will reveal an elevated white cell count, anemia,

and an elevated erythrocyte sedimentation rate and C-reactive protein. Soft tissue gas can be detected by X-ray. CT scan or MRI is more useful to visualize the extent of damage more clearly. As a consequence of their limited availability and the fact that they may delay appropriate treatment these modalities are often not used in diagnosis. Fascial biopsies and surgical exploration are supportive. Feature for necrotizing fasciitis is the capacity to introduce an artery forceps into the wound and slide it easily along the fascial planes. Antibiotic therapy without surgical intervention is also associated with a high mortality rate approaching 100%.^[2] Timely diagnosis and active treatment containing surgical debridement and broad spectrum antibiotics is the key to treat necrotizing fasciitis successfully.^[3] Typically, a surgeon will surgically debrides all necrotic tissue until only healthy viable tissue remains. Once successful debridement is achieved, the surgeon will close the wound and review the need for further debridement approximately one day later. It is common for multiple debridement attempts to be performed before the infection is effectively controlled. Once the infection resolves, secondary reconstruction of limb defects will then be performed to maximize functional and visual

results.^[1] In general the treatment for necrotizing fasciitis starts with recognizing or suspecting the disease in the patient, Administering intra-venous antibiotics, Surgical debridement, Intensive care unit support, Hyperbaric oxygen, Intravenous immunoglobulin, Wound management.^[2]

CASE REPORT

Here we describe the issue of a 67 years male patient who got admitted in general surgery department with the chief complaints of swelling of right leg since 3 days associated with pain, tingling and prickling sensation present. He had the history of fever and vomiting since 3 days. He mentioned trauma to his right leg 10 days and he used some home remedies like applying turmeric paste to the wound as the wound was not healing and was spreading to the entire leg he visited our hospital. He denied any history of diabetes mellitus, cardiopulmonary and vascular diseases. He has mixed diet habit and was a known smoker since 30 years and an occasional drinker since 20 years. On general examination the patient was conscious and cooperative and on physical examination there is swelling, erythema present over the light and was tender and sensitive. His vital signs temperature -98°F, Pulse rate (PR)-100 bpm which were found to be slightly increased and BP-110/60mmHg found to be slightly decreased and on systems examination CVS – S1S2 +ve, RS- BLAE +ve and CNS – NAD later he was referred for some lab investigations which shows decreased Hb – 11gm/dl and increased N -80% and ESR – 20Hr/mm. Initially it was diagnosed as cellulites and was treated with antibiotics Inj. Piptaz 4.5gm IV bd, Inj. Metrogyl 100ml IV TID, anti pyretic Inj.PCT 100ml (1gm) TID, analgesic Inj. Tramadol, an anti inflammatory drug T. Serratiopeptidase 10mg, an anti-ulcerative Inj. Pantop 40mg IV OD and a vitamin supplement was given for 5 days as the wound was not healing and was spreading all over the right leg he was diagnosed with necrotizing fasciitis. In the management of necrotizing fasciitis the antibiotic drug was changed from Inj. Piptaz to Inj. Meropenam and the remaining same therapy was continued along with these surgical intervention was done. The fascia was noted to be dull and grey, consistent with necrotizing fasciitis so radical debridement was done i.e the surgeon radically derides all the necrotic tissue until a healthy viable tissue appeared and the patient was asked to review after a few to examine and to treat further.



Fig. 1 Extensive debridement of fascia.



Fig. 2 Healing wound after extensive debridement.

DISCUSSION

In this case we found that necrotizing fasciitis developed after an injury to the patient's leg which led to the entry and spread of microorganisms into the skin layers of the leg this was supported by **Wilkes A, Nicholas Ang et.al., GA Naqvi et.al., Shahram Nazerani et.al.**, where they reported that the entry of organism into the subcutaneous layer is by one of these two ways i.e. from external trauma involving breaks in the skin, or from internal trauma resulting from intestinal fistulae. Here in this issue the diagnosis of necrotizing fasciitis was confirmed by physical examination and by doing laboratory investigations this was aided by **Al Shukry S et.al., Wilkes A** described that the diagnosis of necrotizing fasciitis is based on the clinical presentation, that is the appearance of the skin, extreme pain, fever and systemic features. Laboratory, radiological and histological investigations can patronage in the diagnosis. Typically, the hematological profile will reveal an elevated white cell count, anemia and an elevated erythrocyte sedimentation rate and C-reactive protein. Soft tissue gas can be detected X-ray. CT scan or MRI can be useful to clearly visualize the extent of damage. As a consequence of their limited availability and the fact that they may delay appropriate treatment these modalities are often not used in diagnosis. Fascial biopsies and surgical exploration are helpful. Here in this issue the management of necrotizing fasciitis was done by Antibiotic therapy, Radical debridement, surgical intervention and supportive therapy was also given this was supported by **Wilkes A, Nicholas Ang et.al., GA Naqvi et.al., Al Shukry S et.al.**, describes that the treatment for necrotizing fasciitis starts with recognizing or suspecting the disease in the patient, Administering intra-venous antibiotics, Surgical debridement, Intensive care unit support, Hyperbaric oxygen, Intravenous immunoglobulin, Wound management.

CONCLUSION

Necrotizing fasciitis is uncommon but potentially fatal disease and is a surgical emergency with a high morbidity and mortality rate. Treating Necrotizing fasciitis is crucial as it may lead to sepsis and multiple

organ failure which in-turn leads to the death of the patient so early diagnosis and treatment plays an important role in saving the limb and life of the patient so given the severity of its nature and the rapidity with which it develops, health care professionals need to be aware of its existence and presentation and institute rapid and aggressive therapy i.e aggressive surgical debridement along with broad spectrum antibiotics. Surgical debridement must be insistent and complete and new therapeutic modalities like Hyperbaric oxygen (HBO) therapy and Vacuum-assisted closure (VAC) may be considered for wound management.

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