

Non-healing ulcer on the foot as Cellulitis: A Case Report

Abstract

Introduction: Cellulitis is a serious bacterial skin infection. The skin is swollen and red, and it feels warm and uncomfortable to the touch. Cellulitis is most commonly found in the lower legs, although it can also appear on the face, arms, and other regions of the body. Bacteria enter the body through a crack or break in the skin. The infection can spread to your lymph nodes and bloodstream if left untreated, creating a major health danger. It is rarely passed down from one generation to the next. **Clinical Findings:** The patient presented with a non-healing ulcer for 30days, due to the insect bite 1month ago on right foot which is being developed into non-healing ulcer on right foot. A 20x6cm wound over the right foot was seen on a plain film radiograph of the knee. It consists of necrotic debris, underlying tendons exposed, peripheral cold and pigmentation. Foul smelling is not present. Based on the appearance of the spreading erythema and radiographically confirmed findings, cellulitis was diagnosed. **Diagnostic Evaluation:** Blood test- Hb-8.6gm%,MCV-91.1fl,MCH-30.9Pico-gm,MCHC-33.9%,Total RBC Count-2.78millions/cu.mm ,RDW-16.8% ,HCT-25.3% , Total WBC Count-7400 cu.mm , Monocytes-04% , Granulocytes-75% ,Lymphocytes-20% , Eosinophills-01% , Basophills-00% , Total Platelet Count-2.06lacs/cu.mm Peripheral Smear: RBCs-Normocytic hypochromic Platelets Adequate on smear, No Haemoparasite seen. **Therapeutic Intervention:** Inj. Ceftriaxone 1gm IV BD; Inj. PAN 40mg IV OD; Inj. Emset 4mg IV TD; Inj. Neomal 100ml IV TDS; Inj. MVI IV OD; Tab. Dolo 650mg TDS; Tab Limcee 500mg OD; Cap. Becosute OD; Protein powder; Tab Shelcal 500mg OD; Tab. Duphalac 15ml. **Conclusion:** My patient was admitted to Surgery Ward, A.V.B.R.H with a known case of Cellulitis and he had a complaint of non-healing-ulcer over the right limb. After getting appropriate treatment his condition was approved.

Keywords: Infectious illnesses, cellulitis, skin diseases

Introduction

Cellulitis is an infection of the skin and subcutaneous tissues that spreads quickly. It is diagnosed clinically when a non-purulent erythemic rash with uneven borders, edema, and local tenderness is observed.(1) The patient was admitted to Surgery Ward A.V.B.R.H with a known case of Cellulitis and he had a complaint of non-healing ulcer over right knee limb. After getting appropriate treatment his condition was approved.

Patient Information

Patient Identification: -

An 88 Year old male **was** admitted in Male Surgery Ward in Acharya Vinoba Bhave Rural Hospital, Wardha with a complaint of non-healing ulcer over **the** right limb.

Present Medical History:-

An 88 Year old male **was** admitted to Male Surgery Ward in Acharya Vinoba Bhave Rural Hospital, Wardha with a complaint of erythematous, non- healing ulcer over right knee with no foul smelling.

Past Medical History:-

An 88Year old male **was** admitted to Male Surgery Ward in Acharya Bhave Rural Hospital with no past medical history.

Family History:-

There are six members in his family. My patient was diagnosed to have Cellulitis and his family **is** disease free i.e, healthy .All the other members of the family were not having any **complaints** in their health except for my patient who was being admitted **to** the hospital.

Past intervention and outcome:-

One month ago due to the bite of an insect, **an** ulcer being developed on the right limb. Hence he **takes** the Ayurvedic medicines for the treatment of **ulcers**. But the ulcer is not being healing due to which he is being admitted to A.V.B.R Hospital.

Clinical Findings:-

Non-healing ulcer, pain on the right foot, Anemia (Hb-8.6gm%), Creatinine-2.1mg/dl

Etiology:-

Cellulitis in the lower limbs is most commonly observed as a secondary condition produced by trauma, which is most often found in sports-related or foreign-body-related wounds. Other common observations include people with a BMI **of** more than 31, geriatric individuals, and people with a history of diabetes or immunological impairment.

Physical Examination:-

There is **an** abnormality found in the head to foot assessment, the male is lean and thin and **has** dull look. There is a non-healing ulcer on the right foot, slough/necrotic debris, underlying tendons exposed, peripheral cold and pigmentation **are** being present on the right foot.

Diagnostic Evaluation: Blood test- Hb-8.6gm%,MCV-91.1fl,MCH-30.9Pico-gm,MCHC-33.9%,Total RBC Count-2.78millions/cu.mm ,RDW-16.8% ,HCT-25.3% , Total WBC Count-7400 cu.mm , Monocytes-04% , Granulocytes-75% ,Lymphocytes-20% , Eosinophils-01% , Basophils-00% , Total Platelete Count-2.06lacs/cu.mm Peripheral Smear: RBCs-Normocytic hypochromic Platelets Adequate on smear, No Haemoparasite seen.

A tissue culture has been done to confirm the presence of bacterial infection and **a** CT scan has been done.

Therapeutic Intervention: Inj. Ceftriaxone 1gm IV BD; Inj. PAN 40mg IV OD; Inj. Emset 4mg IV TD; Inj. Neomal 100ml IV TDS; Inj. MVI IV OD; Tab. Dolo 650mg TDS; Tab

Limcee 500mg OD; Cap. Becosute OD; Protein powder; Tab Shelcal 500mg OD; Tab. Duphalac 15ml.

Discussion

An 88Years old male from Umarched, Yavatmal was admitted to Male Surgery Ward, AVBRH on 8th October 2021 with a complaint of non-healing ulcer on **the** right foot and Hb% less than normal (Anemia). He has an insect bite one month ago; Due to some complications, he took the Ayurvedic treatment but inspite of that the ulcer is not being healed, due to which he **was** admitted in the AVBR Hospital for the treatment. Investigations began as soon as he was admitted to the hospital and Cellulitis has been diagnosed. With the consideration of the disease, the treatment is being begun He improved dramatically after receiving treatment, and treatment continued until my last day of care.

Cellulitis is a clinically diagnosed skin infection of the subcutaneous tissues by a non-purulent erythematous rash with striations and uneven borders, swelling, and local discomfort, as well as pigmentation, that was the situation in this instance.(2) It can also quickly spread to other sections of the body in close proximity to the original dermatologic outbreak.(3) **An** 88-year-old man's health could be **jeopardized** by an infection that spreads via the fascia and skin. The likelihood of toxic shock should not be ignored or treated lightly because the ulcer has transformed in a matter of hours.(4)

Since its discovery in humans in the mid-twentieth century, methicillin-resistant S aureus has been a topic of discussion. Between 2007 and 2010, skin infections accounted for around 3.2 percent of all ED visits in the United States, with 68 percent of those treated with anti-MRSA medicines. Invasive MRSA 4 is thought to be responsible for about 10% of cellulitis cases. (5)Hospitals are now treating abscesses that develop into NF, cellulitis, and/or MRSA more aggressively as a result of an increase in the frequency of abscesses that turn into NF, cellulitis, and/or MRSA. The first line of treatment for an infection, according to the literature, is determined by the regional risk associated with each illness. As a result, the therapy of choice available to the physician will be determined by the increased number of cases in each region.(6)

A complete blood count and blood cultures are the most basic laboratory procedures for detecting the source of infection. Cellulitis is most commonly caused by infections with staphylococcal or streptococcal bacteria. Because of each organism's non-purulent properties, obtaining a positive cell culture in these two species is difficult. In this situation, a blood culture was not ordered as part of the diagnostic test during the initial evaluation in the ED.(7)

Conclusion:

For an 88-month-old man, cellulitis of the knee is a typical occurrence. The majority of initial symptoms could be mistaken for an allergic reaction, delaying diagnosis and treatment in this situation. If there is a history of trauma or bug bites, or if the medical history is impaired, the progression of any skin infection should be closely monitored. Prompt diagnosis and referral to the ED, as well as patient or guardian education and fast therapy, are critical for improving the prognosis of any patient with nonconventional dermatologic signs and symptoms. My patient show great improvement after getting the treatment; the treatment continued until my last appointment.

Note:

The study highlights the efficacy of "Ayurvedic" which is an ancient tradition, used in some parts of India. This ancient concept should be carefully evaluated in the light of modern medical science and can be utilized partially if found suitable.

Ethical Approval:

As per international standard or university standard written ethical approval has been collected and preserved by the author(s).

Consent

As per international standard or university standard, patient's written consent has been collected and preserved by the author(s).

DISCLAIMER:

Authors have declared that no competing interests exist. The products used for this research are commonly and predominantly use products in our area of research and country. There is absolutely no conflict of interest between the authors and producers of the products because we do not intend to use these products as an avenue for any litigation but for the advancement of knowledge. Also, the research was not funded by the producing company rather it was funded by personal efforts of the authors.

References:

1. Cellulitis: Practice Essentials, Background, Pathophysiology [Internet]. [cited 2021 Nov 23]. Available from: <https://emedicine.medscape.com/article/214222-overview>
2. Erysipelas and cellulitis: Overview - InformedHealth.org - NCBI Bookshelf [Internet]. [cited 2021 Nov 23]. Available from: <https://www.ncbi.nlm.nih.gov/books/NBK303996/>
3. Cellulitis: Treatment, types and symptoms [Internet]. [cited 2021 Nov 23]. Available from: <https://www.medicalnewstoday.com/articles/152663>
4. Health Home | Johns Hopkins Medicine [Internet]. [cited 2021 Nov 23]. Available from: <https://www.hopkinsmedicine.org/health>
5. Hassoun A, Linden PK, Friedman B. Incidence, prevalence, and management of MRSA bacteremia across patient populations—a review of recent developments in MRSA management and treatment. *Crit Care*. 2017 Aug 14;21:211.
6. National Treatment Guidelines. :64.
7. Giuliano C, Patel CR, Kale-Pradhan PB. A Guide to Bacterial Culture Identification And Results Interpretation. *P T*. 2019 Apr;44(4):192–200.
8. M. Quirke, F. Boland, and T. Fahey. A pilot study looked at the prevalence and correlates of initial oral antibiotic treatment failure in adult emergency room patients with cellulitis.
9. Claeys KC, Lagnf AM, Patel TB, Jacob MG, Davis SL, Rybak MJ. Claeys KC, Lagnf AM, Patel TB, Jacob MG, Davis SL, Rybak MJ. An experience from the Detroit Medical

Center with acute bacterial skin and skin structure infections treated with intravenous antibiotics in the emergency department or observational unit.

10. MJ Durkin and GR Corey. Tedizolid is the focus of new breakthroughs in the treatment of severe skin and deep skin structure infections.

11. A.K. Pesola, R. Sihvonen, L. Lindholm, A.K. Pesola, R. Sihvonen, L. Lindholm, A.K. Pesola, R. Sihvonen, R. Sihvonen. emm33 is resistant to clindamycin. From 2012 to 2013, *Streptococcus pyogenes* was found in invasive infections in the Helsinki metropolitan region, Finland.

12. Vaziri K, Pershing S, Albini TA, Moshfeghi DM, Moshfeghi AA. Vaziri K, Pershing S, Albini TA, Moshfeghi DM, Moshfeghi AA. Endogenous endophthalmitis risk factors in hospitalised patients with hematogenous infections in the United States.

13. LG Miller, DF Eisenberg, and H. Liu Skin and soft tissue infection rates in ambulatory and inpatient settings from 2005 to 2010. *Infectious Diseases, BMC Infectious Diseases*.

14. Abboud C, Chen W, Tolchin E, Kelly RW, Aballay AM. Baskin SM, Abboud C, Chen W, Tolchin E, Kelly RW, Aballay AM. A case of substantial soft tissue loss following a Percocet subcutaneous injection. *Wounds*.

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