



Bilateral Breast Abscess Complicated with Sever Large Necrotizing Fasciitis and Chest Tissue Gangarene Lead to Bilateral Pneumonia with Resistant Respiratory Failure and MODs Successfully Managed in Diabetic Patient

Abdelrahman A*, Jasmine M, Gupta P, Jamal S, Chetty D and Abid M

Senior Critical Care Specialist, Lifecare hospital, Abudhabi, UAE

*Corresponding author: Abdelrahman A, Senior Critical Care Specialist, Lifecare hospital, Abudhabi, UAE

Abstract

Necrotizing fasciitis (NF) is a life-threatening bacterial infection causing necrosis of the fascia, underlying skin, and vasculature. NF spreads rapidly, making immediate diagnosis important for survival. NF has gained media attention by its rapid progression, frightening 74% mortality, and high-risk of systemic toxicity [1]. Treatment may involve the administration of several broad-spectrum antibiotics, surgical debridement, and skin grafting. Here, we present a case of a 55-year-old patient he presented with bilateral chest swelling and oozing, chest pain, high grade fever and large area of cellulitis 10*10cm. Patient later becomes drawsy, tachypenic, hypotensive and desaturated so rapid elective intubation done after starting vassopressors infusion and patient was connected to mechanical ventilation. He required long time on mechanical ventilation till correction of sepsis, MODs, frequent wound debridement and myopathy.

Keywords: Bilateral breast abscess; Necrotizing fasciitis

Introduction

Necrotizing fasciitis (NF), a life-threatening bacterial infection causing necrosis of the fascia, underlying skin, and vasculature. Typically, the infection begins innocuously after minor trauma to the skin and may progress so rapidly as to consume one inch of flesh each hour [2]. Group A Beta hemolytic streptococcus (GABHS), is frequently identified in NF; however, the infection is commonly polymicrobial in etiology [3]. After entry, the offending organism secretes pyrogenic exotoxin A, beginning a cascade of events leading to eventual tissue destruction. Exotoxin A stimulates the production of cytokines, damaging the endothelial lining and leaking fluid into the extravascular space causing diminished blood flow, tissue hypoxemia, and tissue death [4]. As vasculitis and thrombosis occur in the adjacent tissues, further necrosis occurs involving the subcutaneous nerves. Untreated, the tissue will become gangrenous within 4 to 5 days, sloughing by the second week and releasing toxins into

the bloodstream leading to sepsis and possible death within 24 to 96 hours. Other complications adding to morbidity include disseminated intravascular coagulopathy, respiratory failure, and multisystem organ failure [5].

Case Presentation

A 55-year-old patient he presented with bilateral chest swelling and oozing, chest pain, high grade fever and large area of cellulitis 50*30 cm. Later patient became very critical and unstable (hypotensive, hypoxic, tachycardia and drawsy), immediate resuscitative work done to stabilize patient condition, IVF, vassopressors and mechanical ventilation started. On examination, pupils 2 mm reactive, blood pressure 102/80 - with noradrenaline infusion 25 mcg/min, IVF NS 100 ml/H- pulse rate 101 per minute SPO₂ 100%, temperature 39.5 celsius. Dressing over both nipples with swelling to anterior chest wall. Left and right upper limb, tense swelling more on the left site, no color

Received date: 27 November 2023; **Accepted date:** 03 December 2023; **Published date:** 10 December 2023

Citation: Abdelrahman A, Jasmine M, Gupta P, Jamal S, Chetty D, Abid M (2023) Bilateral Breast Abscess Complicated with Sever Large Necrotizing Fasciitis and Chest Tissue Gangarene Lead to Bilateral Pneumonia with Resistant Respiratory Failure and MODs Successfully Managed in Diabetic Patient. SunText Rev Case Rep Image 4(8): 115.

DOI: <https://doi.org/10.51737/2766-4589.2023.115>

Copyright: © 2023 Abdelrahman A, et al. This is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

change. Laboratory findings revealed high lactate 8, CRP, PCT are very high aminotransferase, urea, creatinine, PTT, INR impaired and low albumin level.

Patient underwent multiple debridement of the chest wound which was deep and large and had gangrenous tissues. Debridement was done under GA in OT and vaccum dressing was

applied over the wound. The wound improved by time and proper antibiotics /feeding/ debrdement, the remaining challenge was myopathy which made the patient to stay longer duration on mechanical ventilation. Weaning done later successfully and the patient was extubated.

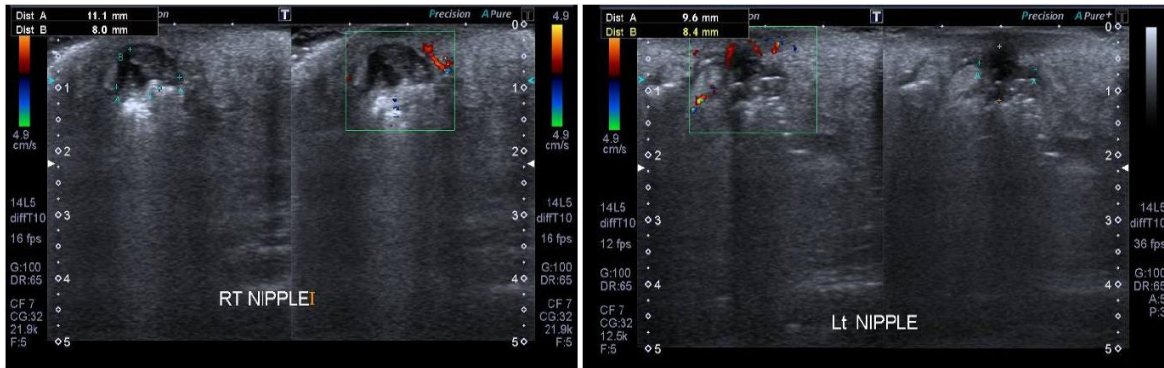


Figure 1: Chest X-Ray.

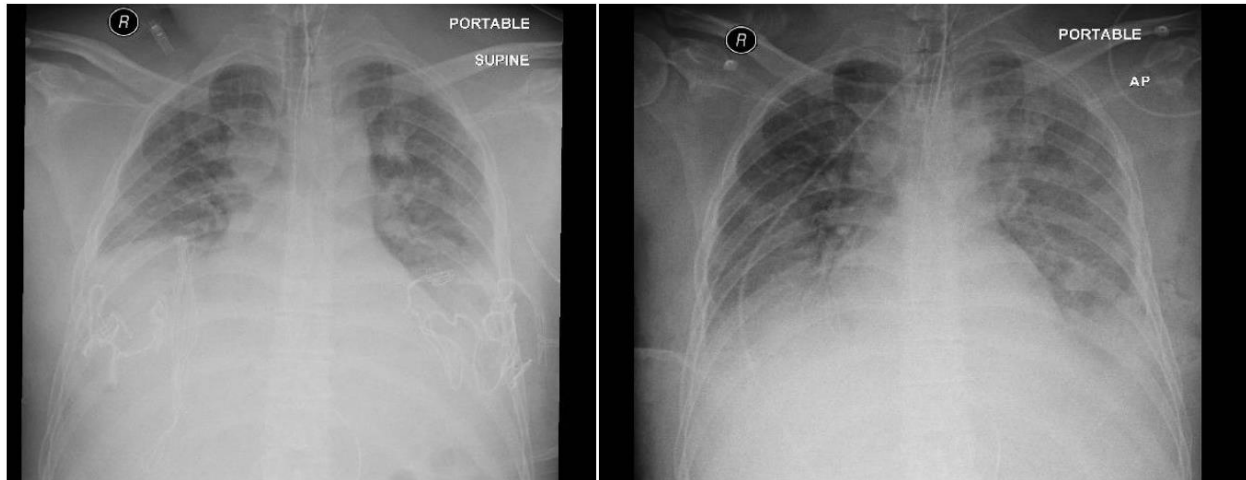


Figure 2: Bilateral pleural effusion.

Investigations

C-reactive protein 176.5 milligram / Liter, Alkaline Phosphatase 469 units / Liter, Alanine Aminotransferase 50 units / liter, Aspartate Aminotransferase 146 units / liter, Urea 22 Millimoles / liter, Creatinine 161 micromole / liter, (PCT) 33.74 microgram / liter, Platelets 137×10^3 / microliter, N-terminal pro B-type natriuretic peptide (Pro BNP) 2718 pg/mlit, Lactate (lactic acid) 6.67 Millimoles / liter, Culture and Sensitivity specimen (Left breast) showed moderate growth of Klebsiella pneumonia radiologically. Ultrasound of right and left breast showed retroareolar edematous breast tissue with increased vascularity likely to be acute mastitis.

Chest x-ray showed endotracheal tube and nasogastric tube are seen in situ. Bilateral basal atelectasis noted. Surgical emphysema is noted in bilateral lower lateral chest wall.

Management

Patient was diagnosed to have bilateral breast abscess necrotizing fasciitis, bilateral pneumonia with respiratory failure, Septic shock, lactic acidosis, MODs and hypoalbuminemia. Patient underwent wide debridement of the gangrenous tissue anterior chest wall done under general anesthesia for repeated times. VAC therapy application done under general anesthesia to facilitate wound healing, then later removed. He was on mechanical ventilation and weaning was difficult due to pectoralis muscles involvement bilaterally beside generalized organ dysfunction, dyselectrolyteamia, and malabsorption.

Patient underwent wound debridement and secondary closure of the anterior chest wall wounds done under general anesthesia. Gradual weaning from mechanical ventilation after wound closure and treatment of sepsis done. Proper nutrition using



Parenteral and enteral feeding modes help to rebuild his muscle tissue again and good recovery. He stayed for about one week on CPAP/PS mode before extubating. Successfully patient extubated and shifted to normal ward for physiotherapy (chest and limbs).

Psychological Issues

Psychological consequences of NF result from intense discomfort, painful dressing changes, and physical disfigurement and include emotions such as anxiety, fear, worry, guilt, anger, and hopelessness. Nurses must provide holistic care for NF patients because emotional conditions, such as depression and anxiety disorders, can slow the healing process and lead to poor management of pain [6]. Patient was on continuous remifentanyl infusion during his treatment course till wound closure [7-11].

References

1. Gillen PB. Necrotizing fasciitis: Early recognition and aggressive treatment remain important. *J Wound and Ostomy Care Nursing*. 1995; 22: 219-221.
2. Sekeres LA. Necrotizing fasciitis: A perioperative case study. *Critical Care Nursing Clinics of North America*. 2000; 12: 181-186.
3. Geeham DM, Pemberton LB. Management of wound infection in the ICU. *Critical Care Nursing Quarterly*. 1997; 69-77.
4. Nowak R. Flesh-eating bacteria: Not new, but still worrisome. *Science*. 199; 264: 1665.
5. Gillen PB. Necrotizing fasciitis: Early recognition and aggressive treatment remain important. *J Wound and Ostomy Care Nursing*. 1995; 22: 219-221.
6. Menzies V. Depression and burn wounds. *Arch Psychiatric Nursing*. 2000; 14: 199-206.
7. Carpenter DO. *Nursing 2001 drug handbook*. Philadelphia: Springhouse. 2001. 138-139.
8. Childs SG. Necrotizing fasciitis: Challenging management of a septic wound. *Orthopaedic Nursing*. 1999; 18: 11-19.
9. Delaney JS, Montgomery DL. How can hyperbaric oxygen contribute to treatment? *The Physician and Sports Medicine*. 2001; 29: 77-84.
10. McQuaid D, Barton J, Campbell EA. Body image issues for children and adolescents with burns. *J Burn Care and Rehabilitation*. 2000; 21: 194-198.
11. Patterson DR, Ptacek JT, Cromes F, Fauerbach JA, Engrav L. Describing and predicting distress and satisfaction with life for burn survivors. *J Burn Care and Rehabilitation*. 2000; 21: 490-497.