

A Case Report On Gas Gangrene With Diabetic Foot Ulcer Of Left Limb Toe Amputation

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ABSTRACT :-

INTRODUCTION: Gas gangrene is an uncommon but potentially it prevents the diabetic foot infection, diabetes is associated with various complication and reduced the quality of life of the patient. The major foot complication like cellulitis, ulceration and gas gangrene shows different clinical condition among them.

Case presentation: A 35 years old male admitted in Tertiary care hospital Wardha, in surgery ward with the complaints of fever, small bleb over the left foot, inflammatory signs around the site of the wound, Increased heart rate, excessive sweating, swelling in the area around an injury since 15 days. No history of hematemesis, abdominal pain, nausea, vomiting. No history of cold, cough, loss of consciousness. No history of trauma. There was no associated illness were present like, tuberculosis, asthma and thyroid disorder. Physical examination and systemic examination was done. In the chest, there are no symmetrical lesions, no axillary lymph node enlargement, S1 and S2 sounds was normal, No pleural effusion. There is no scarring on the abdomen, spleen, or liver, no growth, no bowel sound, and no fluid accumulation. The upper and lower extremities are both moving usually but swelling over lower extremities over toes.

Therapeutic management: Patient was admitted to surgery ward for conservative management of small bleb over the left foot, inflammatory signs around the site of the wound, Increased heart rate, excessive sweating, swelling in the area around an injury since 15 days. Sugar level is 210 mg/dl. All the routine investigation done. The patient had been investigations like, blood test, Physical examination, X-ray, CT Scan, MRI is done to check for areas of dead muscle tissue. Microbial culture test was performed that reveals positive for staphylococcus aureus bacteria. Patient was started on IV fluid, antibiotics, analgesic, antacid and another supportive medication. Surgery opinion was taken and patient was advised for conservative management.

Conclusion: due to conservative management and quality nursing care patient condition was stable and had no active complaints at present and improves the quality of life of the patient. hence patient is being discharged.

Keywords: Gas gangrene, Diabetic foot , Cellulitis .

Introduction:

Gas gangrene is a rare ailment it has the potential to protect diabetic feet against infection. Diabetes is linked to several issues and hurts the patient's quality of life. Cellulitis, ulceration, and gas gangrene are three of the most prevalent foot diseases, each with its symptoms. Patients with gas gangrene frequently employ the concept of auto amputation. In this case, a surgical amputation was performed on the patient, which alleviated and enhanced the patient's quality of life.¹

According to this research, diabetic foot and gas gangrene are caused by a decrease in blood supply to the tissues, which results in necrosis due to diabetes and other damage. In this case, the patient had diabetes.² In the United States, necrosis is a rare condition, with just about 1000 cases each year. The frequency is anticipated to be higher in developing countries with limited access to healthcare and antibiotics, but the exact amount is unknown. With the best care, such as early discovery, surgical care, antibiotic treatment, and hyperbaric oxygen therapy, the total death rate is 20% to 30%, and as low as 5% to 10%, the disease has a 100 per cent fatality rate if not treated. Variables in the host, such as an immunocompromised state, diabetes, and spontaneous infections, can result in mortality rates as high as 67%.³ When a disorder affects the soft tissue of the belly or the chest wall, the fatality rate might reach 60%,

compared to 5% to 30% for diseases of the extremities.⁴With the greatest of care early detection, surgical care, antibiotic treatment, and hyperbaric oxygen therapy—the fatality rate is 20-30 per cent, and it can be as low as 5-10 per cent with the finest of care.

Case History

A surgical case was taken by Tertiary Care Hospital Wardha, Maharashtra, India. This complicated case was taken care of nicely by the hospital because of expert medical team management and excellent nursing care.

Patient information

We report a 35 years old male admitted in Tertiary care hospital Wardha, in surgery ward. With the complaints of fever, small bleb over the left foot, inflammatory signs around the site of the wound, Increased heart rate, excessive sweating, swelling in the area around an injury since 15 days.No history of hematemesis, abdominal pain, nausea, vomiting. No history of cold, cough, loss of consciousness. No history of trauma. There was no associated illness were present like, tuberculosis, asthma and thyroid disorder. Physical examination and systemic examination was done. In the chest, there are no symmetrical lesions, no axillary lymph node enlargement, S1 and S2 sounds was normal, No pleural effusion. There is no scarring on the abdomen, spleen, or liver, no growth, no bowel sound, and no fluid accumulation. The upper and lower extremities are both moving usually but swelling over lower extremities over toes.

Physical examination was done: Height is 169 cm, and weight is 50 kg, Pulse: 82 beats per min, Blood pressure: 110/70 mm of Hg, temperature 99°F, respiration is 24 breaths per minute, sugar level is 210 mg/dl. No rash or active bleeding was present.general examination was normal.

Medical, family, and Psycho-social history: - There were no history of comorbidities in patient's family. Patient belongs toNuclear family.He is living with his wife, son, and daughter. In patient family there is no any history diabetes mellitus, hypertension, asthma, tuberculosis etc. He is mentally stable, conscious, and oriented. He maintains good interpersonal relationships with doctors, nurses, and other patients, relatives. Patient do not have bad habit like smoking, tobacco chewing and alcoholism.

Relevant past intervention with outcomes: - For above mentioned complaints patient was admitted in private hospital. He was get relief from that hospital. That's why patient referred to tertiary care hospital Wardha.

Diagnostic Assessment: All the routine investigations were done: Hemoglobin: 13.5gm %. Red blood cells: 3.44, White blood cells: 8400, MCHC: 30.4, MCV: 63.5, MCH: 21.2, Total platelet count: 3.40, HCT: 16.5. Kidney function and liver function test were done. Obtaining a patient's medical history, performing a physical examination, prescribing medication, and getting an X-ray CT scan to confirm the diagnosis of Gas Gangrene with Diabetic Foot Ulcer.

Therapeutic management: Patient was admitted to surgery ward for conservative management of small bleb over the left foot, inflammatory signs around the site of the wound, Increased heart rate, excessive sweating, swelling in the area around an injury since 15 days.Sugar level is 190 mg/dl. All the routine investigation done. The patient had been investigations like, blood test, Physical examination, X-ray, CT Scan, MRI is done to check for areas of dead muscle tissue. Microbial culture test was performed that reveals positive for staphylococcus aureus bacteria. Patient was started on IV fluid, antibiotics, analgesic, antacid and another supportive medication. Surgery opinion was taken and patient was advised for conservative management.

Treatment on admission: Inj. Ceftriaxone 1gm IV BD 5 Days,subactum 0.5 g/ ampicillin1.5 g IV BD, Tab. Paracetamol 500 mg BD, Tramodal 1.5 mg in 100 ml NS BD, penicillin 250 mg BD ,Inj.Pan 40 mg O.D .

Treatment on Discharge:Tab amoxicillin clavunate 875 mg BD 15 days, Tab. Metformin 500 mg BD 15 days ,Tab Metronidazole 500mg BD 7 days , Tab cephalixin 500 mg BD 7 days.

Patient was stable and had no active complaints at present. Hence patient is being discharged.

Prognosis: - was good Follow-up and outcome and patient condition was improved.

Outcomes: Despite the most significant efforts of the Patient, their vibrant health will improve, and her health status will improve even more. Follow-up in case of following signs and symptoms patient are requested to attend the emergency department. Diagnostic and other test findings are critical.

Discussion:

A 35 years old male admitted in Tertiary care hospital Wardha, in surgery ward. With the complaints of fever, small bleb over the left foot, inflammatory signs around the site of the wound, Increased heart rate, excessive sweating, swelling in the area around an injury since 15 days.No history of hematemesis, abdominal pain, nausea, vomiting. No history of cold, cough, loss of consciousness. No history of trauma. There was no associated illness were present like, tuberculosis, asthma and thyroid disorder.

Gas gangrene is a bacterial infection that causes gas to accumulate in the tissues, requiring medical and surgical treatment. Diabetes is associated with several comorbidities and a reduction in patient quality of life. The tissue contracts blacken and eventually detaches in gas gangrene patients, necessitating surgical amputation. Regular exercise and a good diet may minimize the incidence of gangrene in people with diabetes. Proper foot care should be followed to avoid wearing tight shoes and having poor diabetes control. The primary task in this situation is to treat hyperglycemia, or high blood sugar levels, with hypoglycemic medications and insulin injection.⁵⁻⁸ Cefixime, sulbactam, ceftriaxone, and metronidazole, used to treat extensive wound healing, were used to treat diabetic feet with gas gangrene. Diabetes causes peripheral neuropathy which may manifest in several different forms including sensory⁹⁻¹⁵, focal/multisectoral and autonomic neuropathies. More than 80% of amputation occur after foot ulceration or injury, which can result from diabetic neuropathy.

Conclusion:

A 35 years old male admitted in Tertiary care hospital Wardha, in surgery ward. With the complaints of fever, small bleb over the left foot, inflammatory signs around the site of the wound, Increased heart rate, excessive sweating, swelling in the area around an injury since 15 days. On specific investigation Gas Gangrene with Diabetic Foot Ulcer. Conservative treatment was given. After the treatment patient's prognosis was good. Overall Patient had given a positive response to treatment and patient was stable and patient condition was improved. Hence patient is being discharged.

Ethical approval: Not applicable

Patient Inform consent: While preparing a case report and for publication patient's informed consent has been taken.

Conflict of Interest : The Author declares that there are no conflicts of interest.

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