

Austere Molten Thermal 3 Degree Blaze – Rare Case Report

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Abstract:

Burn is the condition in which is caused by heat and fires which leads to severe tissue damage and deterioration of skin. Burn is an emergency and accidental injury leads to drastic skin issues and physiological disability. Thermal blaze is type of burn which is caused by heat, electrical shock and fire. Majorly there are 4 types of burn in 4 degrees burn skin gets severely burn with subcutaneous tissues, nerve ending damaging. A case of 38-year-old male admitted in burn ward with an incident of thermal burn. During physical examination, according to Muir and Barclay formula patient having 15 percent back trunk burn with absence of pain in burn wound. After diagnostic evaluation physician found and diagnosed that he is having full thickness burn and suggested to take antibiotic therapy, topical ointment of silver sulfadiazine and skin debridement procedure used to give to patient. After taken all intervention patient prognosis was good.

Category: Emergency dermatology.

Keywords —Austere, Molten, Debridement, Muir and Barclay, Blaze

I. INTRODUCTION

Burn is an emergency condition caused by heating and firing which causes severe skin damage (1). Thermal blaze is emergency and accidental condition caused by heat and electrical shock. Thermal burn damage skin and which leads to physiological disability of body. Thermal burn can be caused due to radiation, chemical component, electrical shock, hot water and steam etc. generally there are 4 types of burn. During 1st degree burn only superficial skin gets injured with formation of redness, swelling and skin peeling. This type of burn can treat in home. In 2nd degree burn damage extend beyond the layer of superficial skin and characterized with blister, severe pain, swelling. During 3rd degree burn damage of whole skin tissue are takes place

characterized with loss of pain sensation, char and development of leathery texture. This type of burn required essential medical supervision care with antibiotic therapy, skin grafting and skin debridement (2). In India yearly 53% get injured with thermal burn (3). Burn management can be done with antibiotic therapy, bun dressing, topical ointment therapy, skin grafting and skin debridement (4).

CASE PRESENTATION

The patient was 38 years old gets admitted in burn ward with a incident of accidental thermal burn (3 degree burn) injury characterized with loss of pain sensation and shortness of breath. Patient was professionally electrician in private company the accident of burn cause during when patient was working with electrical wire without wearing rubber gloves the current passed overall his body

and he was getting shocked. After accident patient becomes unconscious and he gets admitted in burn unit ward. Patient was complaining loss of pain sensation and shortness of breath.

After physical examination, percentage of burning area calculate by Muir and Barclay formula it was detected 15 percentage burn injury occurs on patient back trunk and characterized with loss of pain sensation, shortness of beath, during inspection whole skin tissue are totally damage with the nerve ending.

IN DIAGNOSTIC EVALUATION complete blood count, lft, kft, albumin and all radiological tests are performed. after diagnostic evaluation and procedures physician was suggested to follow medical management with pharmacological antibiotic therapy and regular topical ointment of silver sulfadiazine. in pharmacological drugs inj.lopezbd, inj.ceftriaxone bd, triple antibiotic polymyxim b, inj. penicillin od, inj.acetaminophem od given to patient. after somedays patient had undergone with skin grafting and skin debridement. after skin debridement patient gets recover.

TESTS	PATIENT VALUE	NORMAL VALUE
T PROTEIN	4.4 MG/DL	60- 78 MG/DL
T BILIRUBIN	0.3 MG/DL	5-21 MG/DL
ALKALINE PHOSPHATASE PROTEIN	120 MG/DL	0 TO 270 MG/DL
ASPARTATE TRANSAMINASE	63 MG/DL	0- 46 MG/DL
ALANINE TRANSAMINASE	38 MG/DL	0 – 40 MG/DL

Discussion:

Present case showing the accidental thermal blaze with loss of pain sensation and shortness of breath with 15 percent of burn treated with both pharmacological treatment and surgical procedure. Oxygen therapy was given to treat breathing difficulty.in medical management antibiotic therapy used to give to patient. In surgical management skin debridement and skin grafting was done. Skin debridement is surgical procedure used to perform in burn patient in this procedure cleaning of wound done and removal of dead skin done with maintain aseptic technique for wound healing. after getting proper treatment patient get recover.

Similar thermal burn case study revealed that, A 29 years old male patient had incident of thermal burn

due to laptop fan extractor characterized with formation of blister 4cm in size in left thigh and fluid collection in wound site after getting proper treatment patient gets recover in 4 weeks (5).

Another study revealed that, A 58-year-old female get admitted in burn unit ICU for critical care. She had severe thermal injury due household fire characterized with loss of consciousness and she get intubated for airway protection and oxygen therapy. she undergone with excision debridement and skin grafting. Approximately she takes 3 weeks to gets recover (6).

Similar thermal burn study revealed that, Case of 13-year-old girl suffered from electrical injury while take bathing. Girl get burn injury in abdomen and hands while bathing she held her mobile in right hand and continuous to charging and suddenly mobile burns out and she was unconscious and characterized with blister formation, fluid collection from wound after taking continuous silver sulfadiazine ointment and getting surgical skin resection she took 3 weeks to get recover (7).

Another study revealed that, A thermal burn case of 3-year-old male child was admitted in pediatric emergency department with 2nd degree burn in both hands and wrapped with bandage due to burn of old wood gas stove. According to child’s mother just after hand burned child was screamed loudly and he was shifted to hospital. Patient all vital sign is normal and stable after physical examination but there was blister formation on child hand with redness and swelling after all diagnostic evaluation child was treated with topical ointment and he gets recover after some days (8).

According to Michael Parson survey study report, thermal burns are very harmful. Around every year near about 500,000 people needed essential medical treatment of burn and 10% people need hospital admission. According to their survey it is essential and necessary to get proper treatment from practical healthcare professionals (9).

Similar case study of ocular burn reveled that, A case of 38-year-old lady was cooking in her home suddenly she used to fry dish in pan, during deep frying the hot oil suddenly flashed on her face, hand and eyes. She was admitted in emergency department and after physical examination she was

diagnosed with 2nd degree burn in frontal, maxillary and mandibular area of her face. She also having burn injury in her right-hand palmer side and her eyes is just swollen and minimally injured. Her pupil is reactive to light and sclera is minimally injected. Patient was treated with an eye irrigation of 1 liter ringer lactate solution and topical ointment therapy was given to her after that the patient goes on follow up for ophthalmology (10).

Conclusion

Burn is condition caused by heating, chemicals, radiation, electrical and steam which leads to damage of skin tissue. Thermal burn is emergency situation which caused due to burning of skin due to electrical and hot object which leads to severe deterioration of skin. Burn can be treated by proper antibiotic therapy, wound dressing and skin debridement.

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