NECROTISING FASCIITIS OF EYELID WITH MIRACLE RECOVERY,A CASE SERIES WITH NARRATIVE REVIEW LITERATURE

ABSTRACT-

Necrotising fasciitis is aggressive and rapidly progressive infection along the subcutaneous facial plane. Necrotising fasciitis is usually located in the extremities, abdomen, perineurium. It is extremely rare in the eyelid region.A better prognosis relies critically on early diagnosis, prompt medical treatment and timely surgical intervention.We are here to describe a case series of two patients with necrotizing fasciitis of eye lid,.despite severe presentation ,timely antibiotic therapy and proper surgical interventions led to successful outcome in this cases.

KEYWORDS- Necrotising, Fasciitis, Eye infections, bacterial, orbital diseases, Reconstructive surgical procedures, Subcutaneous tissue,

INTRODUCTION-

Necrotising fasciitis is aggressive and rapidly progressive infection along the subcutaneous facial plane. Necrotising fasciitis is usually located in the extremities, abdomen, perineurium. It is extremely rare in the eyelid region. Most often occurs in individual with diabetes mellitus, alcoholism, immuno suppression[1]. Most common caused by Group A β Hemolytic Streptococci other organism associated are Group G β Hemolytic Streptococi[2]. Other bacteria are Staph aureus, E-coli, Enterobacter. Pseudomonas, Proteus, Bacteroids, Clostridium etc. Most cases commence with trauma to the skin surface from a penetrating injury with seeding of bacteria .infection starts in the deep tissue planes and the epidermis might not be initially affected,infection spreads to venous and lymphatic channels leading to edema. The infection spread rapidly over the course of hours to days leading to septicemia and multi- organ failure and death. Death is seen in 12-57% cases[3]. Intense perivascular inflammation cause thrombosis and expression of proteolytic exotoxins contribute to the necrosis of involved tissues with vision loss due to ophthalmic artery or central retinal artery occlusion. The spread of infection is directly proportional to the thickness of the subcutaneous layers. The spread of infection into posterior orbit occurs via facial envelope of rectus muscle .Individual with Necrotising fasciitis are more likely to present with pyrexia and other forms of systemic infection. The main age of presentation of patient with Necrotising fasciitis is 38-44 years. The disease occurs in all ages with no statistical difference in race or sex[5]. The involvement of face from Necrotising fasciitis is

rare only 35 such cases have been reported. It is associated with severe disfigurement of the face possessing reconstructive problem.

CASE REPORTS

CASE-1 A 46 yr old male patient came to eye opd with complain of pain and swelling over the right eye since 7 days, there is a history of trauma to Right 7 days back with metal pipe.there is no visual disturbance.Results on examination revealed that there is periorbital edema with blackish discoloration of periorbital skin of Right eye associated with pain and discharge. except for inability to open his eyes due to swelling, the patient ocular examination was normal,including a visual acuity of 20/20 in both eyes, unrestricted ocular motility ,and quiet anterior segment .Skull radiographs fail to revealed any bony fractures or sinus opacification. A head and orbit computed tomography scan revealed marked soft tissue swelling of right periocular regions.patient was hospitalized and routine blood investigation was send and patient was started on intravenous antibiotics i.e injection penicillin 1gm iv 6 hourly, injection gentamycin 80 mg i.v 6 hourly, injection metro 100mg i.v 4hrly with regular wound debridement of necrotizing tissue, the superficial layers of epidermis of the pretarsal and preseptal areas of right eye upper lid had sloughed and magnesium sulphate dressing done twice daily. Blood investigation s/o increased in leukocytes count of 5400/cumm, Westegren sedimentation rate of 134 mm/hr and negative HIV status. Wound cultures from the affected areas is send and came out to be positive for Enterobacter aerogenes. X-ray head and orbit-s/o soft tissue swelling, no e/o foreign body Usg local -s/o soft tissue swelling with infectious etiology. Blood culture report-no growth of micro-organism seen .CT SCAN-s/o soft tissue swelling with no evidence of bony erosion ,no e/o foreign body,no e/o fracture of orbital wall.

Within 48 hrs response was seen with reduction in purulent discharge and decrease in size of swelling Local tissue debridement was continued. 7days course of intra-venous antibiotics was given with local antibiotics drops,after 7days patient was shifted to oral medication tab amoxiclav 625mg 6hrly,tab (diclo+serratiopeptidase) combi 6hrly for 7 days. After a week of intravenous antibiotics and topical wound care,all signs of active infection had subsided .The necrotic areas in both upper and lower lid began to granulate to prevent wound contracture, suture tarsoraphy was done on day 7. on day 30 tarsoraphy was removed and skin grafting done over upper lid by taking post auricular skin graft. patient was discharged on oral antibiotics and local treatment.

CASE-2

32 yr old male patient came to casualty with history of road traffic accident and fall from bike 4 days back with injury to left eye .There is large upper lid periorbital edema with erythema and blackish skin discoloration over the left eye upper lid associated with pain. On examination visual acuity of Right eye were 6/9 no e/o proptosis and ocular movements were not restricted. Lid margins were not involved. Anterior segment examination is WNL

Fundus examination-WNL.The patient was hospitalized and started on intravenous antibiotics injection penicillin 1gm iv 6hrly, injection gentamycin 80 mg iv 6hrly, injection metronidazole 100 cc iv 4hrly given for first 48 hours, with local antibiotic drops and magnesium sulphate dressing with aggressive debridement of subcutaneous Necrotising tissue and surrounding structure twice a day.Investigations done were - x-ray head and orbit- s/o of soft tissue swelling. USG local part s/o soft tissue swelling , wound culture report-A Beta Hemolytic streptococci .HIV status—negative, WBC count-elevated (15,000/micro litre),sr electrolyte level-normal ,kft-normal, blood sugar level (fasting) and (post-prandial)—wnl .CT scan –s/o soft tissue swelling, no evidence of bony erosion, no e/o fracture of orbital wall.

After 48 hours there was no response to treatment and spread of infection increases to involve the pre auricular region. We shifted patient to intravenous vancomycin 500mg 6hrly after doing sensitivity test and other local treatment were same. Aggressive debridement was continued .Within 48 hours the swelling decreases debridement was continued for next 7 days regularly twice daily. 7 days course of intravenous vancomycin was given there was good response, there is no discharge and margins are well demarcated. Lateral tarsoraphy was done to prevent exposure keratopathy and wound contracture. Patient is shifted on oral antibiotics after 7days on tab Amoxclav 625mg 6hrly,tab (diclo+serratiopeptidase)combination 6hrly for next 7 days.skin grafting was done after 1 month.

DISCUSSION-

The term necrotizing fasciitis was coined by Wilson in 1950s to describe the necrosis of the fascia and subcutaneous tissue with relative sparing of the underlying muscle[6].It is often difficult to diagnosed necrotizing fasciitis and sometimes patient are treated as simple cellulitis until they rapidly detoriate[7] . Necrotising fasciitis has rapid progression in 48-72hrs along with inflammatory edema and violaceous discolouration of tissue. There is pain as the infection spread through the subcutaneous tissue between the fascial plane, in comparison to the areas of the body the necrotizing fasciitis of the eyelid provides a very good irrigating sites which allows the infection of this site more notorious. Necrotizing fasciitis prognosis is poor. Localized form in eyelids has 10% mortality[8].Although associated illness particularly diabetes mellitus, contribute to this poor prognosis the principal factors are the time taken to make the diagnosis and delay in surgical intervention[9] .The discussion to debride the infected area is specially difficult when the face is involved because cosmetic implication are considered..

CONCLUSION- Necrotizing fasciitis is potentially lethal condition in which speedy investigations, diagnosis, intensive antibiotic treatment and early surgical debridement is the correct course of management.

DECLARATION OF CONFLICTING INTERESTS-

The authors declared no potential conflicts of interest regarding the research, authorship, and/or publication of this article.

PATIENT CONSENT STATEMENT

We hereby confirm that we have obtained written informed consent from the patient in this case report for publication of their clinical information

FUNDING

The authors did not receive any financial support for research authorship, or publication of this article.

ACKNOWLEDGMENTS-

None

AUTHORS CONTRIBUTIONS-

All authors read and agreed to the published version of the manuscript.

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