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RESEARCH ARTICLE

CHALLENGES AND THEIR SOLUTIONS IN MANAGEMENT OF LOWER EXTREMITY BURNS

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Abstract

Introduction:-

Burns and their treatment are a significant medical problem.
Lower limb burns pose a greater challenge in over all burns because they are commonest potential donor sites of skin graft.
Each lower limb burn account for 18%tbsa.so 36%of entire tbsa is covered only by lower limbs.
Most of the lowerlimbs burns are circumferential and in high percentages.
Most common causes are
Mixed flame burns due to
Suicides
Alcoholics(increased contact time)
Epileptics
And electrical burns

Aim:-

To Analyse The Problems Faced In Management Of Lower Limb Burns

Objectives:

The use of appropriate treatment strategies in treating lower extremity burns in the shortest possible time from the occurrence of burns can not only save the patients life but also shorten their hospital stay and recovery time.

Inclusion Criteria:

Pts involving majorly lowerlimb burns
All degree of burns
Adults and children
With comorbidities
Delayed presentations

Methodology:-

Prospective study of 6 patients is done involving lower limb burns
Out of them 1 is childwith major involvement of lowerlimb burns
1 Iselderly With Comorbidities Lke Diabetes And Hypertension ,
2 Are Late Presentations
2 Are Electric Burn Patients

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Difficulties Encountered In Treating Lower Limb Burns Are Due To

Loss of donor sites
Difficulty in ambulation
Central line-formation of dvt
Late presentations
Needs multistaging
Changes in circulation and nerve function
Progression to necrotising fascitis or osteomyelitis
Dvt due to prolonged immobilisation
In elderly age group –atherosclerosis
Difficult to manage extensive raw areas

Case 1

21 yr male with 20% electric burns involving lower limb burns
To reduce edema compressive pneumatic pump was used
Wound was managed in 2 stages-defect over rt leg covered with Perforator based fasciocutaneous flap raw area after adequate wound preparation –autograft done

Wound infections	Culture sensitive antibiotics,biatain ag dressings
raw area	Medial,anterior ,posterior aspect of rt thigh
coverage	Autograft from post aspect of lt thigh
Defect over rt LL	Perforator based fasciocutaneous flap

ON ADMISSION

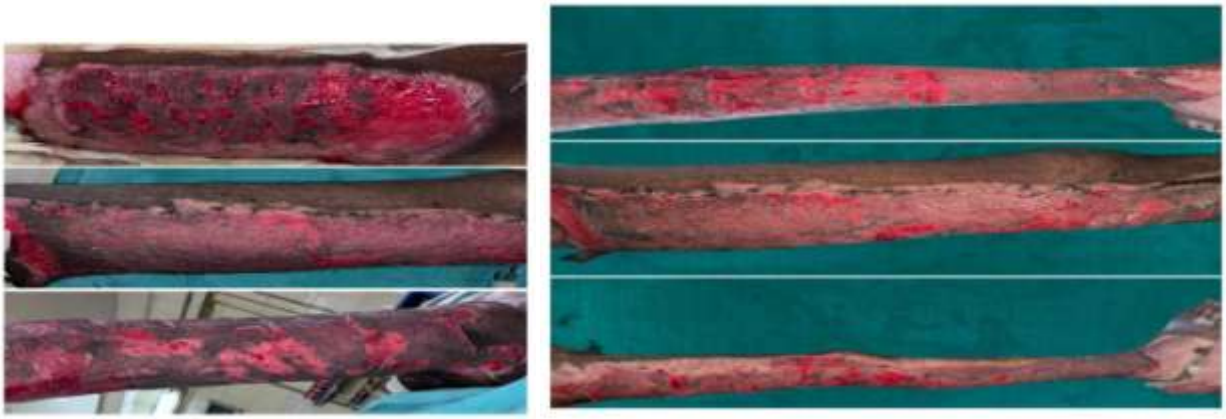
AFTER DEBRIDEMENT

Post Burn Defect-
Fasciocutaneous Flap Used

Case 2
26/m admitted with 50%electric burns involving lt ul and b/l ll

delayed presentation	Biofilm removal
Wound infections	Culture sensitive antibiotics
Decreasing burn surface area	NPWT
Wound edema	Compressive pneumatic tourniquet
Coverage in 2 stages	Lt thigh ,rt thigh covered In 2 sitting lt leg covered
graft	Autograft from rt leg
dvt	Adequate mobilisation,crepebandages,avoiding central line,prophylactic long acting anticoagulants like clexane

Initial coverage for lt thigh
Near full coverage of rawareas over both lowerlimbs



Case3

25/m admitted with 60%electric flash burns involving face ,ant trunk and b/l lower limbs

Achievements :patient discharged in 15 days of admission

Wound dressings	Baitain ag dressings
Superficial burns over upper limbs,face	Collagen application at the time of presentation
10 % of 2nd degree burns over lower limbs	Tangential excision+collagen application
	Physiotherapy, mobilisation
Prevention of dvt	Prophylactic long acting anticoagulants,crepebandages.

Lower limb burns-tangential excision and collagen..wounds healed in 15 days.

Case 4

60/m admitted with 10%electric burns with comorbidities

Delayed presentation	Biofilm removal
Wound infections	Aceticacid dressings,NPWT
Coverage of Lt LL	Dermal substituites followed by ssg
Coverage of Rt LL	flap cover
Graft loss	Debridement +silver impregnated foamdressings,regraft
Diabetes ,hypertension	Regular blood glucose monitoring,antihypertensives
Monophasic flow in arteries of LL	Therapeutic anticoagulants

Case 5

37/m admitted with 30%electric burns involving scalp
&b/l LL
Defect over rt LL.exposed bone 13*5 cm.flap cover done in 2 stages. use of 3 flaps done in this patient-LOCAL,REGIONAL,DISTANT

delayed presentation	wound debridement
scalpdefect	transposition flap
post burn defect lt LL	Cross leg flap+PTA perforator basedFC flap
Transient Foot drop	Physiotherapy,footdrop splint

Case 8
7/f admitted on pbd 5 of 25%MFB

Delayed presentation	debridement
Wound infections	Culture sensitive antibiotics.
Coverage done in 2 stages	Lt thigh covered with autograft from lt leg
Wound edema	Limb elevation,crepe bandage application

Conclusion:-

1. Because of major part of TBSA is covered by lower limbs,involvement of lower limb burns pose a greater challenge for treatment
2. Coverage is done in stages after thorough wound preparation
3. Adequate mobilisation,limb elevation,use ofcrepe bandages,prophylactic anticoagulants,compressive pnematic pump,post operative rehabilitation can save limbs of burn patients along with their lives.
4. For defects flap cover is planned in addition to ssg
5. For superficial burns after covering with collagen and after wound healing-they also can be used as donor sites.