Preserving the Tissues of Problematic Wounds Using A Glycerine - Based Wound Dressing

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Electric Burns are usually problematic wounds. The authors used ***Elasto-Gel ™*** (***EG***), glycerine-based, semi-occlusive wound dressing for conserving a boy's wounded tissues on both feet.

Case Report

A 15 year old boy burned by high voltage injury. The punctuate entry was on the head (face and skull? and the exit sites were on his feet. Including the head of the first metatarsal bone on the right foot, and the head of the fifth metatarsal bone on the left foot. ***EG*** was used almost continuously before and after the operations: necrectomies and repeated graftings. ***EG*** was used for preventing and treating his pathologic scars.

The authors could preserve the two main parts of the boy's feet (head of first and fifth metatarsal bones) so the child can stand, walk and work without any problems. The hospitalization time in the first period was twelve weeks.

You can see on photos the course of the boy's healing in the different stages of wound healing and in the reconstructive period. ***Elasto-Gel ™*** was used to perform the following:

1. Definitive operation was not possible
   a) no amputation wanted
   b) preserve tissues (of three balancing points)
   c) wound was moderately infected
2. Preparing and cleaning the wound surfaces for grafting (2 times)
3. Preventing of pathologic scars (after every operation)
4. Treating ulcers of scars
   a) after graftings
   b) after reconstructive local flap
5. Of cooling-effect of ***EG***, after local flap and grafting on face (face-lifting)

Motto

Choose the suitable method and local agents for the patients.

EG has some extra special properties, these extra specialties of ***EG*** based on the effect of **Glycerine** (Glycerin (pH), 1,2,3 - propane-triol)

1. ***EG*** has bacteriostatic (anti-inflammatory) effect
    a) Acid environment created beneath ***EG*** (pH 5-6) results in a reduction in the number of infection.
    b) Reduces the number of Pseudomonas aeruginosa in burn wounds.
2. ***EG*** influences the skin water content
    a) Has an intrinsic water like behavior.
    b) Increase of water content is possible without maceration of the skin.
3. ***EG*** will plasticize the skin.
4. ***EG*** has a bio-transforming effect.

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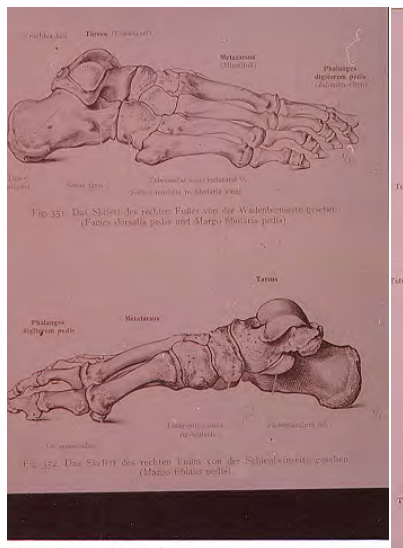
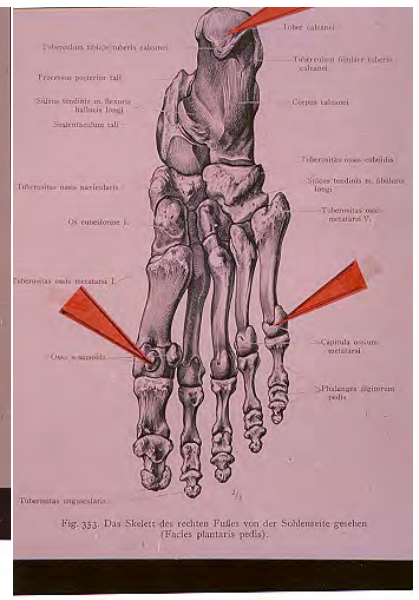
1./ 2nd pb day
The punctate entry /head/

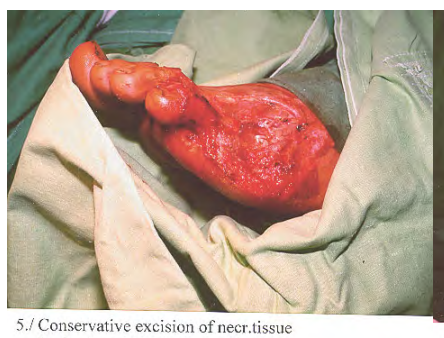
2./ Exit sites /feet/



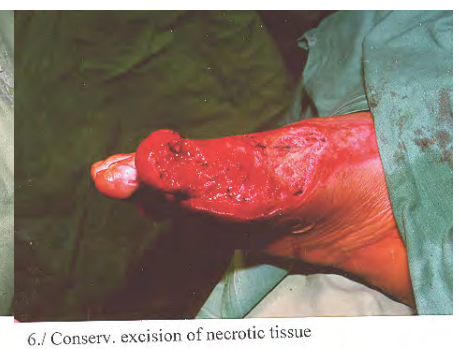
3./ Bones of the foot
/anat.picture/



4 3 main "balancing-points"



5./ Conservative excision of necr.tissue
Saving bones!



6./ Conserv. excision of necrotic tissue
Saving bones!

7./ Preserving the important bones
Using Elasto-Gel before grafting /feet/

8./ EG use for cleaning of burn surface /face/

9./ 7th pb day: Excision and suture of the wound of head

10./ After a month: postop.
/right foot/

11./ After a month: postop.
/left foot/

12./ Using EG, 2 th pb.months

13./ 3rd months, after healing

14./ EG therapy after 6 months
Prevention of pathologic scars

15./ Hypertrophic scar after grafting /face/
3rd pb.months
EG therapy of hypertrophic scars

16./ After 3 months: EG therapy

17./ Reconstruction by local flap because of scar.
/Right foot/

18./ Left foot reconstruction

19./ Reconstruction by local flap /face/

20./ Using EG for cooling effect