

Reverse technology in the treatment of burns: the use of tropical fruits

Authors: H.W.C. Hofland, E.E. Zijlstra, Department of Research and Innovation, Rotterdam Center for Tropical Medicine, Rotterdam, the Netherlands.



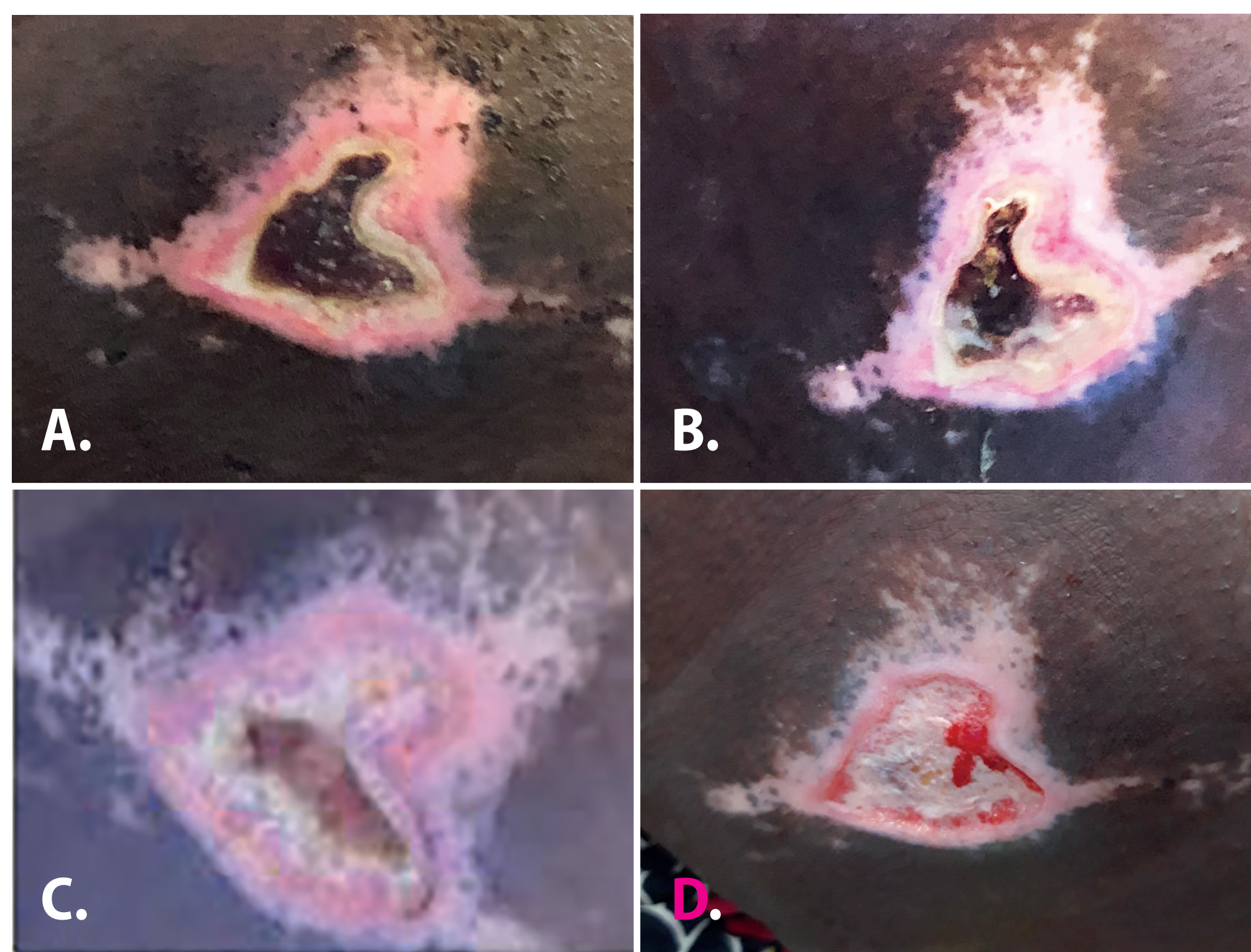
Rotterdam Center
for Tropical Medicine

Correspondence: h.w.c.hofland@gmail.com

Introduction

- Traditional medicine plays a major role in Africa. Through reverse technology, natural products derived from various tropical fruits formed the basis of a new treatment modality for burns in high income settings (NexoBrid® MediWound Ltd).
- Its action is based on enzymatic activity of natural products like papaya (*Carcia papaya*) and pineapple.

CASE 1 - Kibogora Hospital Rwanda



- A man with a pressure ulcer was admitted for surgical debridement. The necrosis could not be removed. Treatment had been with cleaning and dry gauze; there was no infection. Surgery was delayed as priority was given to more severe cases. It was then decided to apply papaya.
- After 2 days of papaya treatment, the necrosis increasingly loosened.
- After 6 days, the necrosis disappeared, leaving granulation tissue that was dressed with honey and healed within a week.
- Hier mist nog uitleg

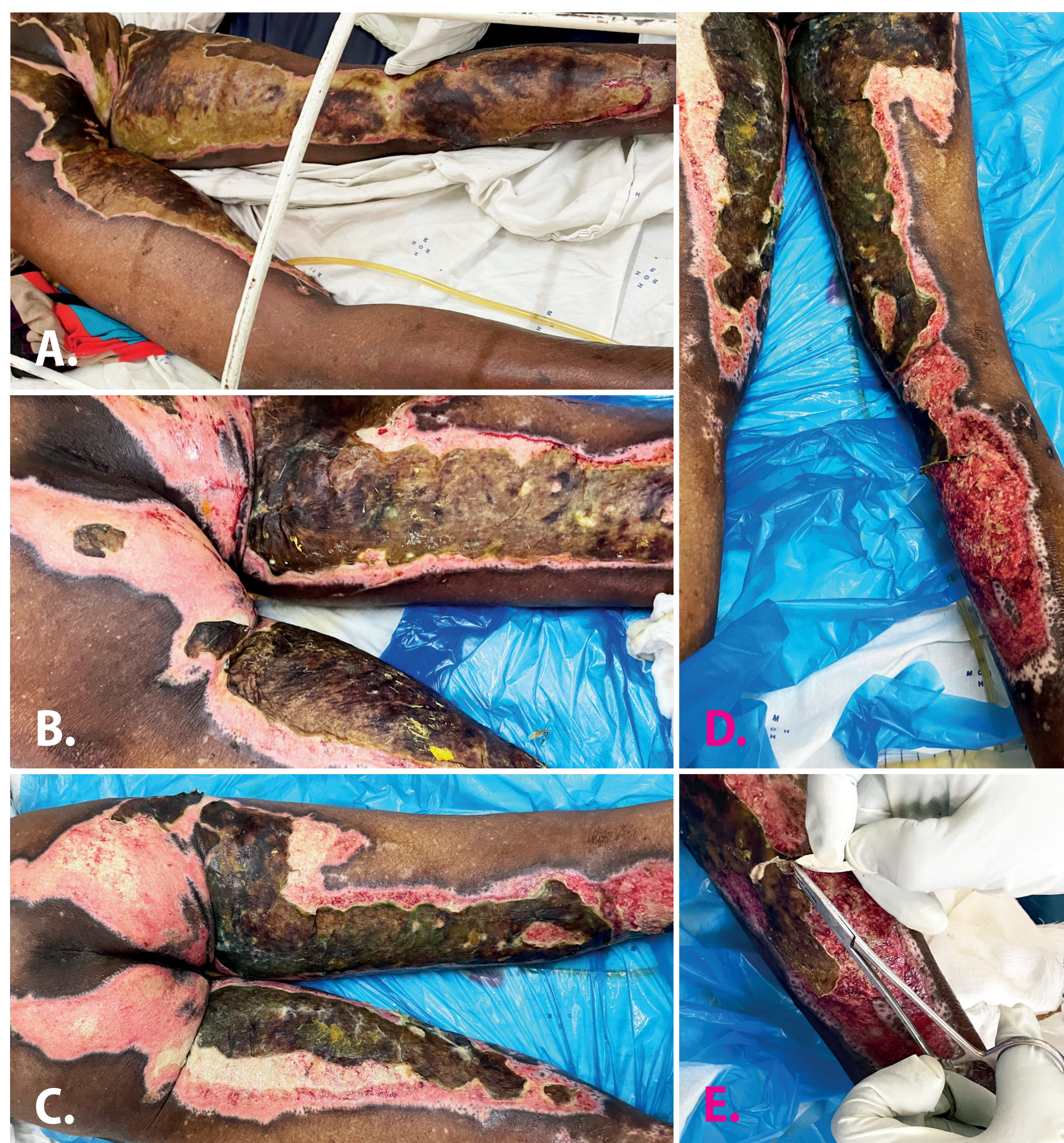
CASE 2 - Remote area Mozambique



- A girl with a mixed thickness burn was treated with honey.
- Hypergranulation developed.
- Papaya treatment was started. After 4 days the hypergranulation tissue had considerably reduced.
- Due to intensive exercises she was able to stretch her leg.

CASE 3 - Queen Elizabeth Central Hospital, Blantyre, Malawi

- An 80 year old woman sustained a full thickness burn due to fire. TBSA was 12%. Despite treatment for two weeks with EUSOL /paraffine, the necrosis remained.



- After 2 days of treatment of papaya the necrosis became softer.
- After 4 days, the necrosis on her buttocks, calf on right leg was easily removed. Granulation tissue was seen and progressively healed. When only 4% of TBSA on the leg remained, surgically debridement and grafting was done. She went home completely healed.
- Moet hier nog uitleg komen?
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Conclusion

Papaya seems effective in wound debridement, prevention of infection, and stimulates the development of a granulating wound suitable for a split skin graft. It is also effective in reducing hypergranulation. In low resource settings natural products derived from tropical fruits are easy to use, safe and effective in the treatment of burns, widely available and cheap.



Properties of papaya

Contains the enzyme papaine, normally used as meat tenderizer

- In burn care used for enzymatic debridement
- Removes thick necrosis and hypergranulation leaving healthy granulating tissue
- Is not painful
- Has antibacterial properties that increase wound healing

Application of papaya (see above)

1. Ripe papaya
2. Make a mash from the ripe papaya (not the seeds)
3. Put the mash on a dry gauze
4. Apply to the wound and change daily or every other day