MANAGEMENT OF EXTENSIVE WOUNDS WITH THE MEEK TECHNIQUE AT RMH

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SUPERVISED BY

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INTRODUCTION

- BURN INJURIES ARE A MAJOR EPIDEMIOLOGIC PROBLEM AROUND THE GLOBE RESULTING IN SIGNIFICANT MORBIDITY AND DEATH, ESPECIALLY IN NEONATES, INFANTS AND CHILDREN WHOSE DERMAL LAYER OF THE SKIN IS GENERALLY THINNER THAN IN ADULTS.
- SCALD BURN BEING THE MOST COMMON CAUSE (93%), FOLLOWED BY FLAME (5.6%) AND ELECTRICAL (1.4%) IN PEDIATRIC POPULATION

INTRODUCTION

- THE MANAGEMENT BECOMES VERY CHALLENGING WITH AN EXTENSIVE BURNT SURFACE AND LIMITED INTACT SKIN WHICH CAN BE HARVESTED FOR GRAFT.
- IN SETTINGS WHERE ALTERNATIVE METHODS OF CULTURED EPITHELIAL SKIN CELLS ARE NOT AVAILABLE, THE MEEK TECHNIQUE IS THE MOST SUITABLE SOLUTION AND IS MUCH CHEAPER AND LESS COMPLEX

THE MEEK TECHNIQUE - HISTORY

- THIS TECHNIQUE OF SKIN MICROGRAFTING WAS DEVELOPED BY A CERTAIN CICERO PARKER MEEK IN THE 1950 WHILE WORKING IN TREATING BURN PATIENTS AT THE AIKEN HOSPITAL IN SOUTH CAROLINA AND HE PRESENTED FOR THE FIRST TIME IN 1958.
- HE DEVELOPED A DEVICE WITH THE HELP OF AN ENGINEER (S. P. WALL) CALLED MICRODERMATOME WHICH WOULD CUT THE SKIN IN POSTAGE STAMP-LIKE SMALL SKIN GRAFTS THAT HE WOULD INITIALLY PUT ONE BY ONE ON THE WOUND BED.

THE MEEK TECHNIQUE - HISTORY

- THAT WAS VERY CUMBERSOME, REASON WHY THE TECHNIQUE WAS ABANDONED AND SLOWLY FORGOTTEN AS IT WAS REPLACED BY THE TECHNIQUE OF MESHING A SKIN GRAFT WHICH WAS DEVELOPED LATER ON IN 1964
- THE TECHNIQUE WAS RESURRECTED AND IMPROVED IN THE EARLY 1990'S BY DUTCH SURGEONS KREIS AND HUMECA THAT WERE WORKING AT THE RED CROSS HOSPITAL IN BEVERWIJK.

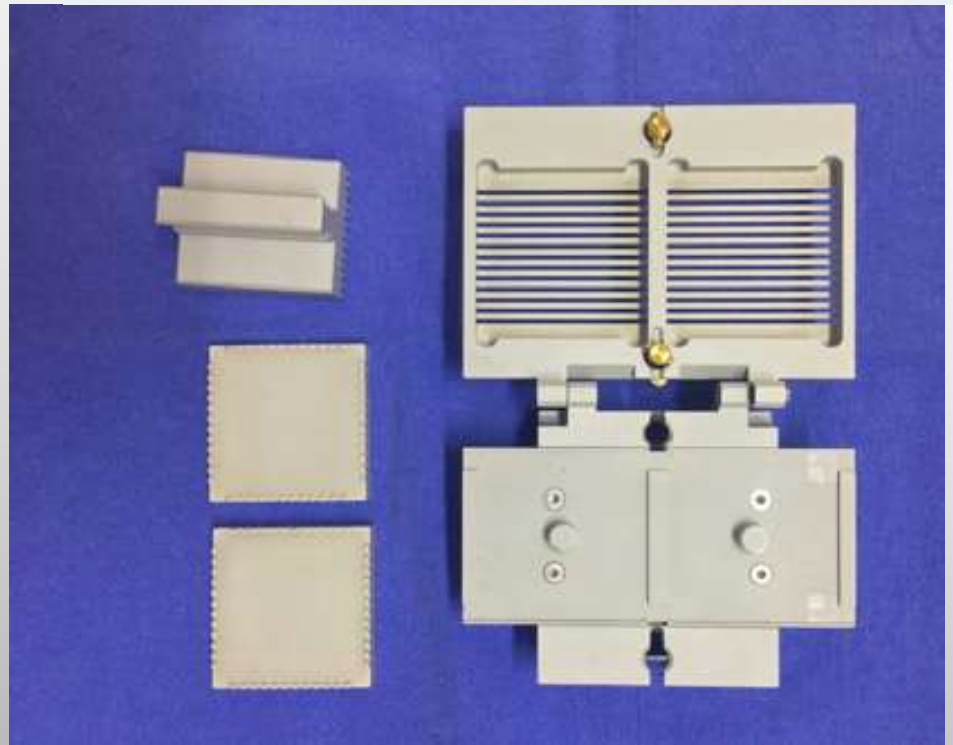
THE MEEK TECHNIQUE – HOW IT WORKS

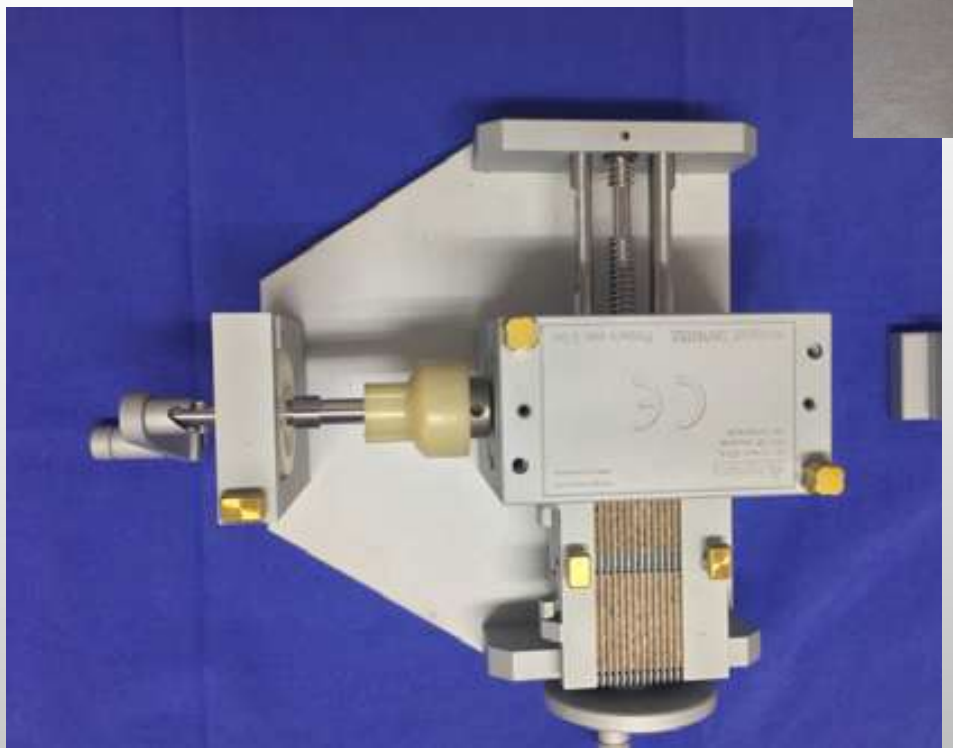
- THE MEEK TECHNIQUE IS MAINLY USED TO TREAT PATIENTS WITH EXTENSIVE BURNS AND SIGNIFICANTLY REDUCED AREAS OF HEALTHY DONOR SKIN.
- A HARVESTED SPLIT SKIN IS PLACED ON A 4.2X4.2CM^2 CORK SQUARE AND PASSED THROUGH THE DERMATOME MEEK MACHINE WITH 13 PARALLEL BLADES WHICH CUTS A 42X42MM^2 SPLIT THICKNESS SKIN INTO 196 SMALL SKINS OF 3X3MM^2 GIVING A SKIN EDGE LENGTH OF 2352MM (196X4X3) FROM 168MM (42X4). SINCE EPITHELIALIZATION COMES FROM SKIN EDGES, THIS TECHNIQUE MULTIPLIES THAT LENGTH 14 TIMES.

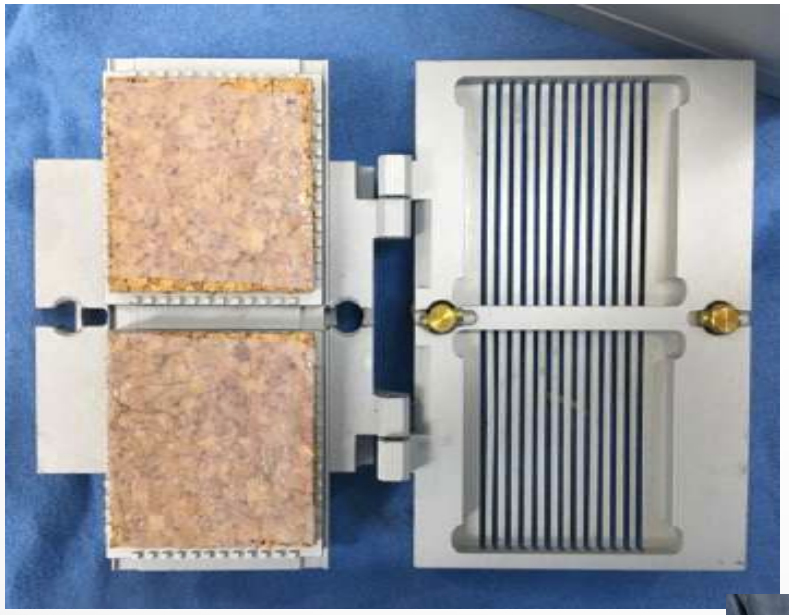
THE MEEK TECHNIQUE – HOW IT WORKS

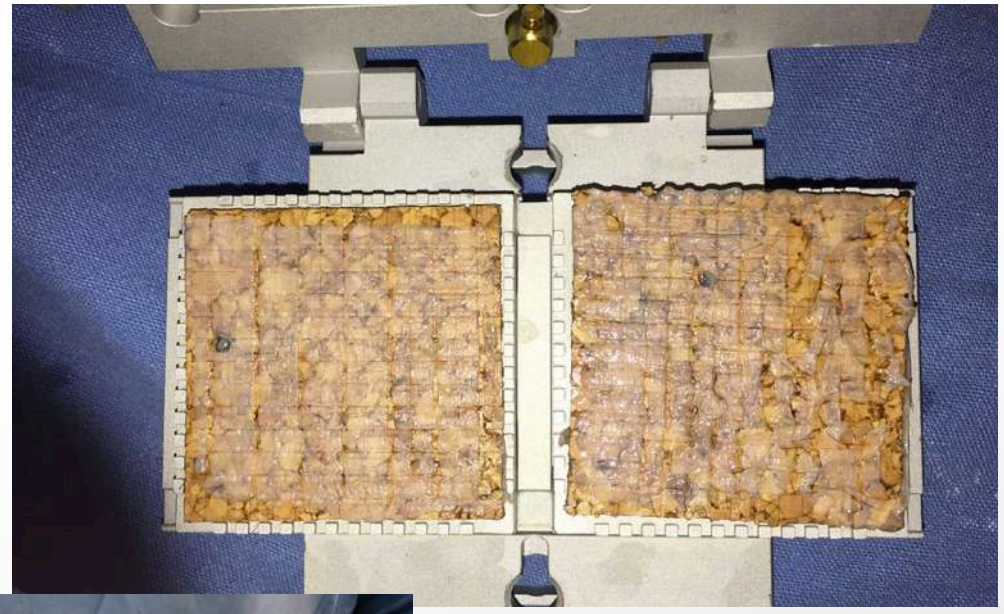
- AFTER GLUE SPRAYING ON THE EPIDERMAL SIDE, IT IS THEN PRESSED ON A PRE-FOLDED GAUZE, AND PLEATS ARE PULLED OUT ON ALL FOUR SIDES TO PROVIDE A UNIFORM EXPANSION OF ISLANDS WITH RATIOS VARYING FROM 1:2 TO 1:9. THE EXPANDED GAUZE WITH DERMAL SIDE EXPOSED IS APPLIED ON A WELL PREPARED WOUND BED, AND FIXED UNTO.

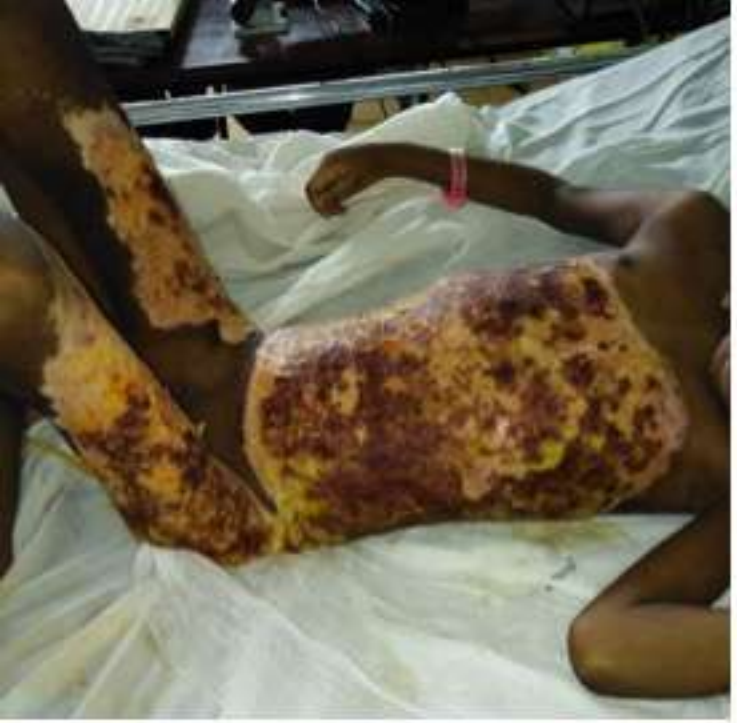

Humeca
Skin transplantation Technology
MEEK Adhesive
200 ml

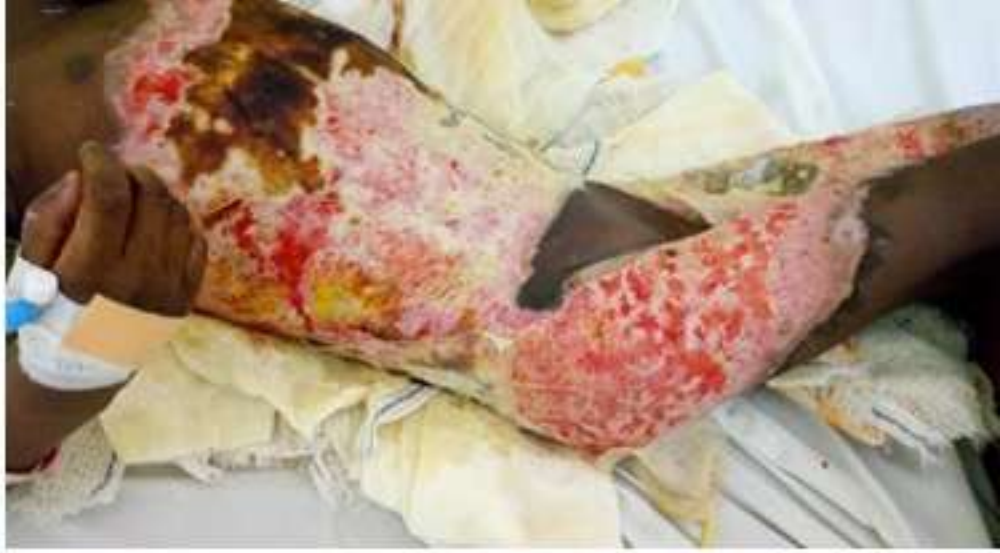


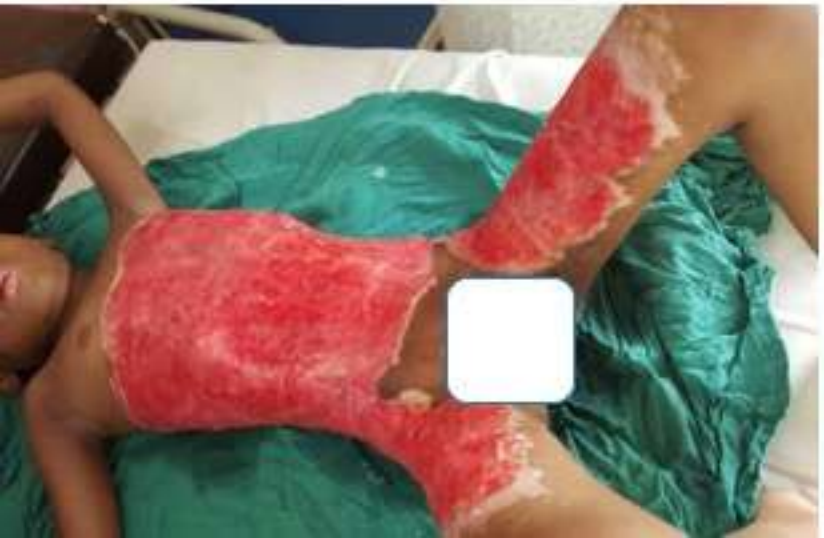


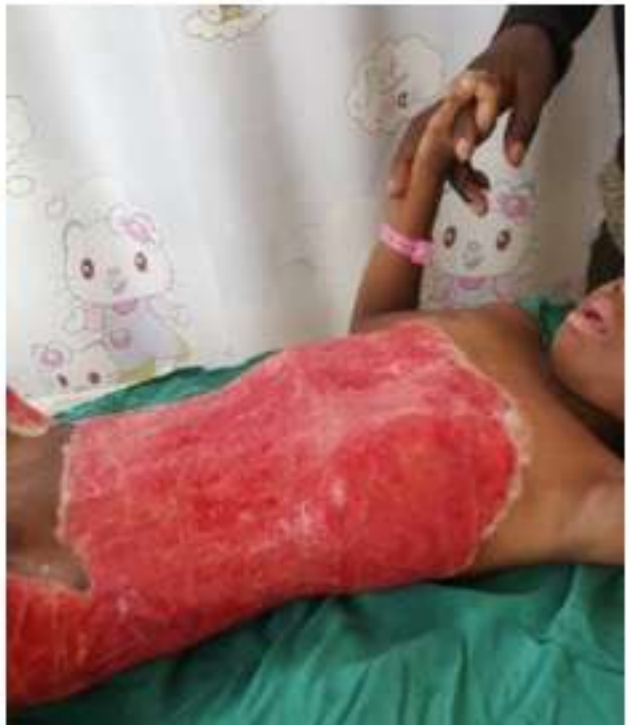


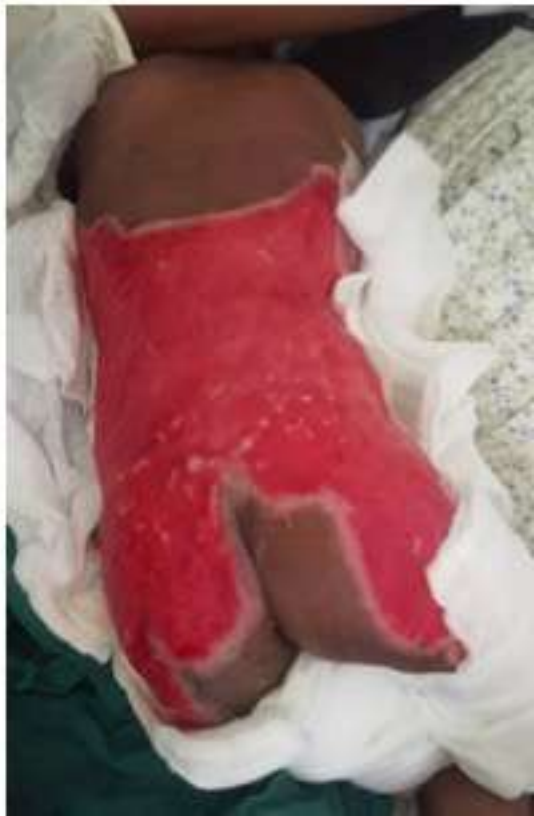












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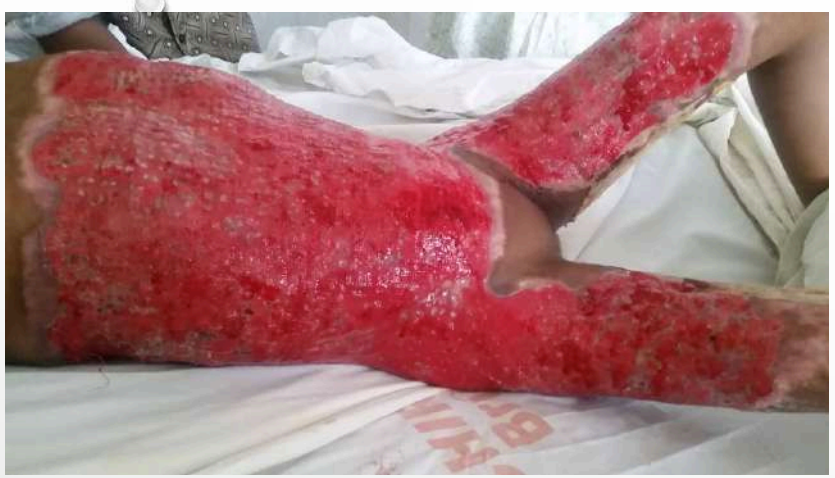

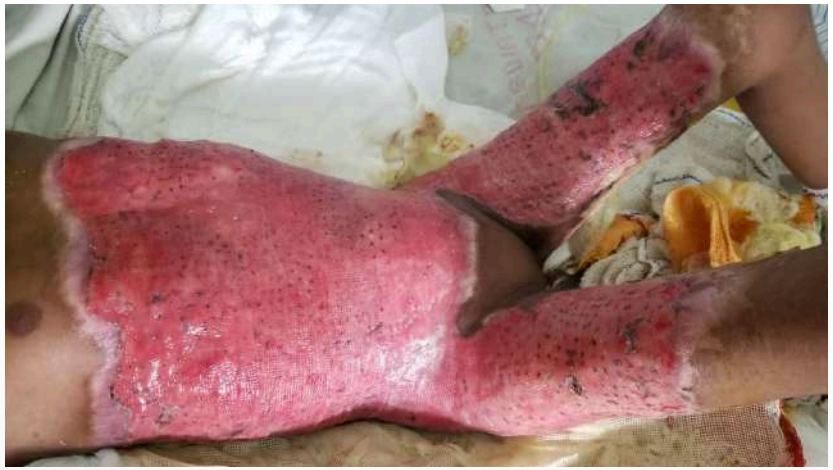

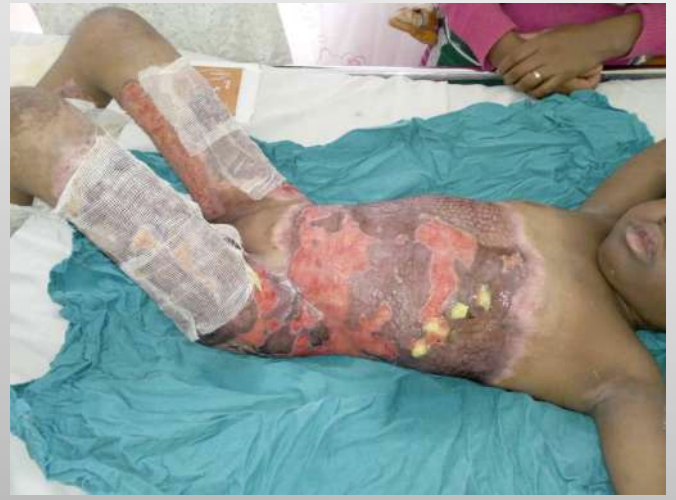

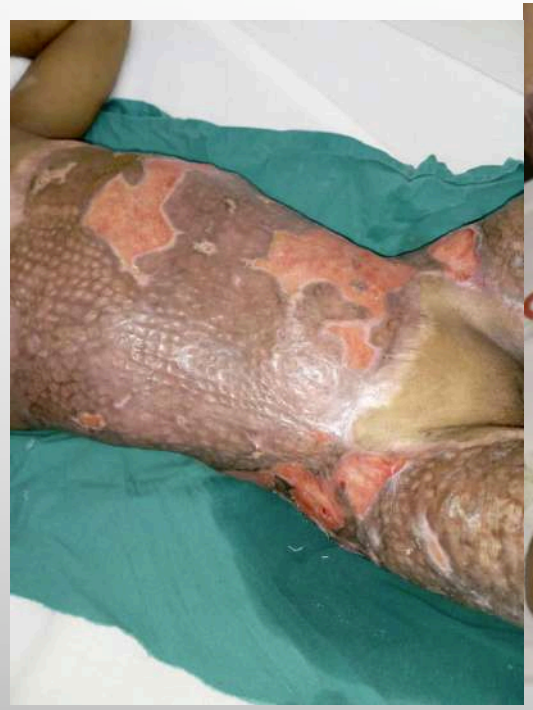

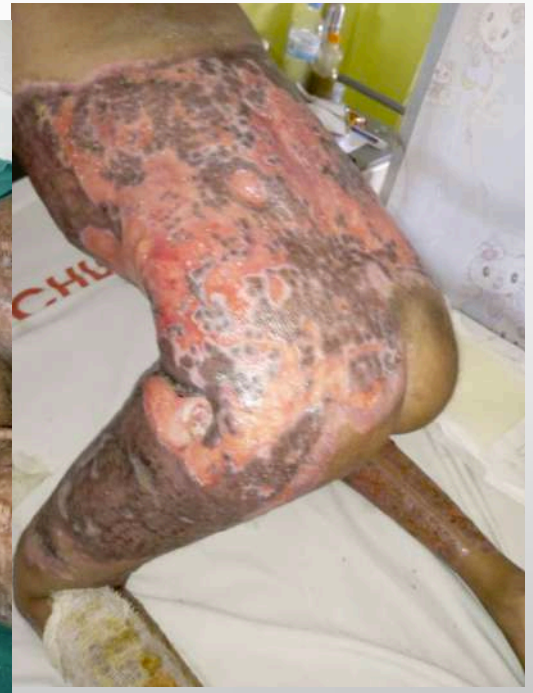


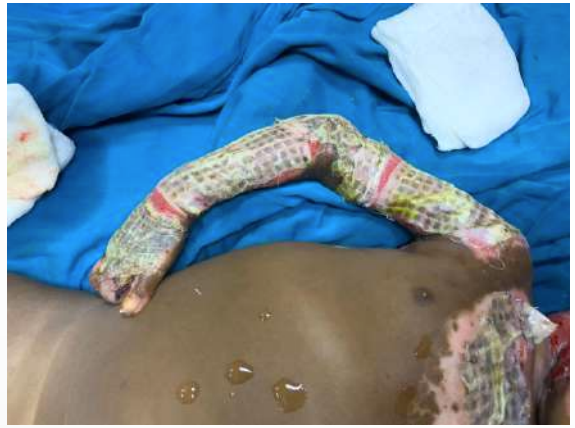
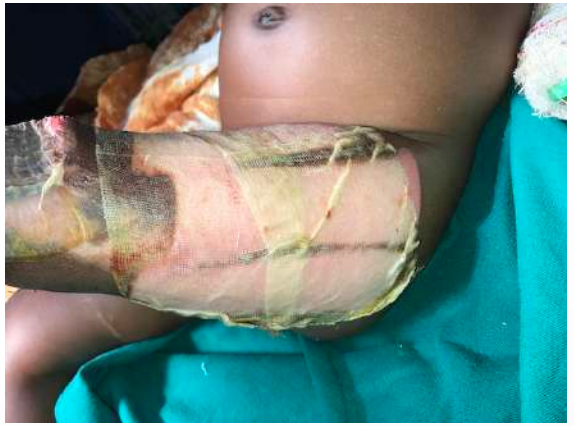
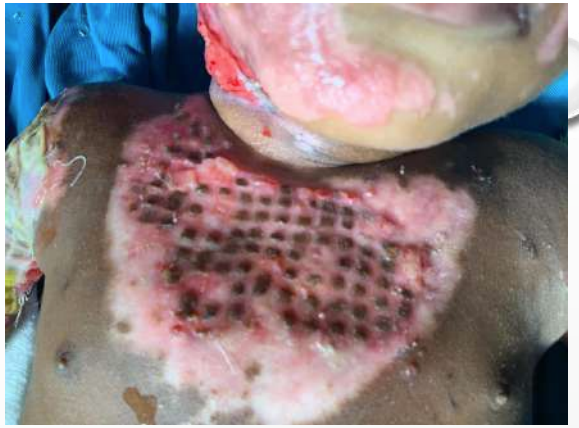


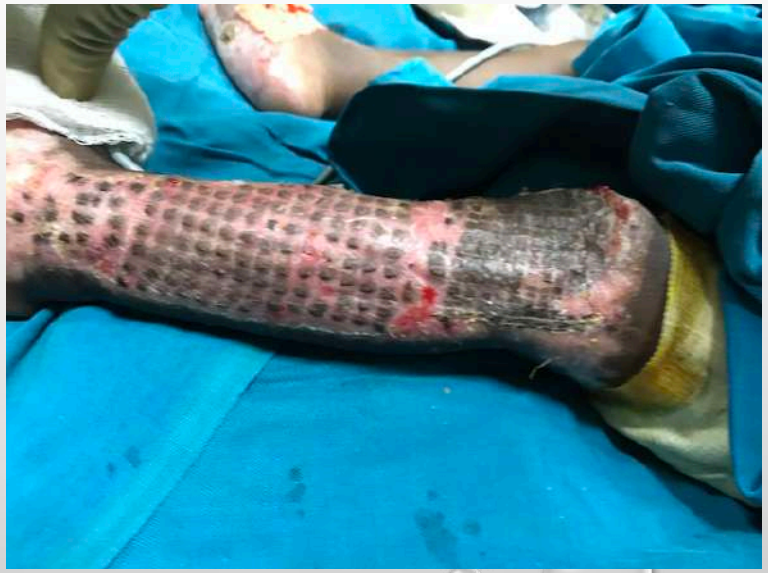
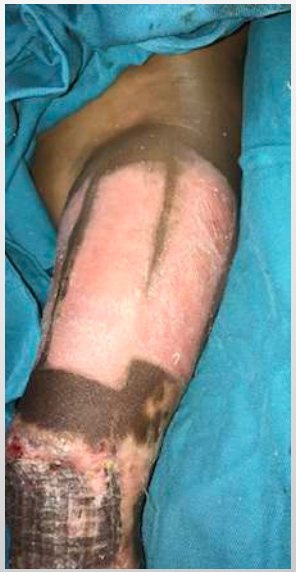




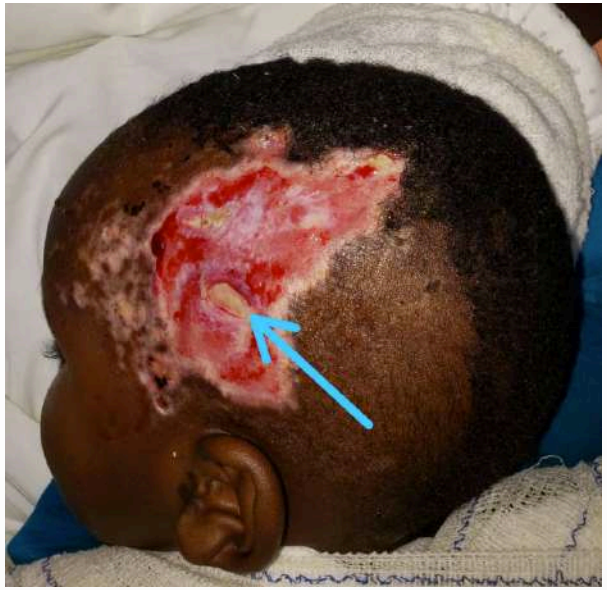


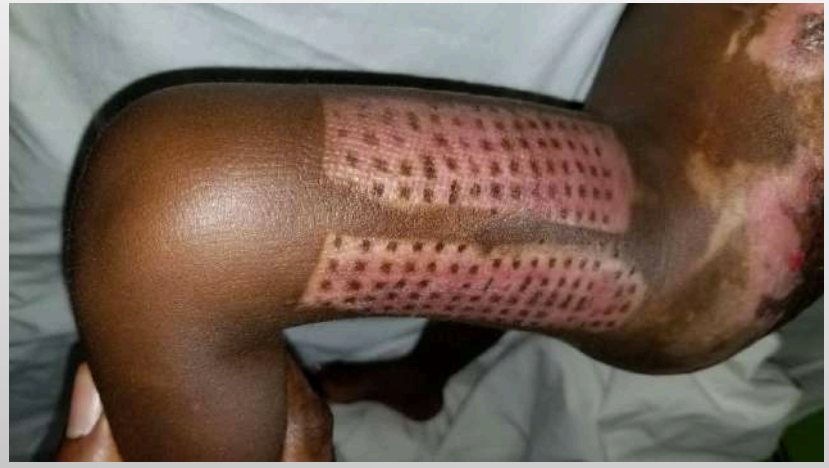

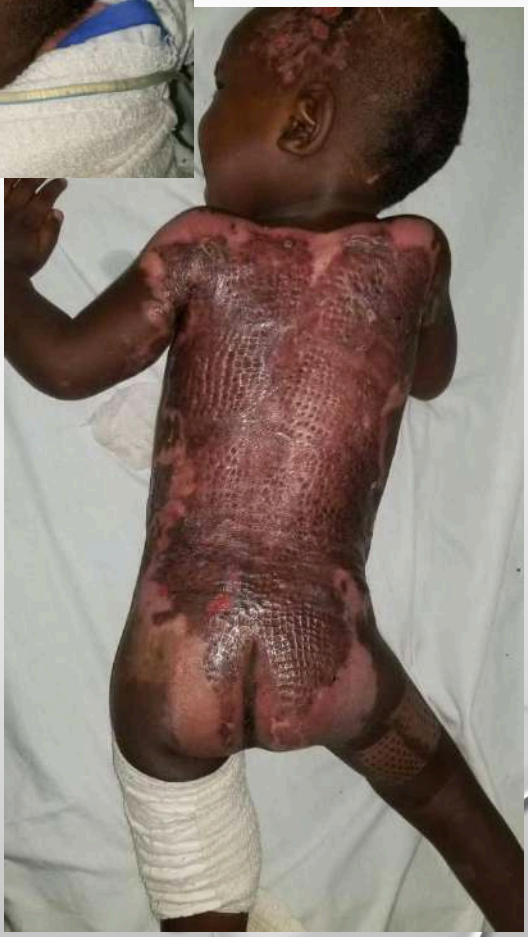

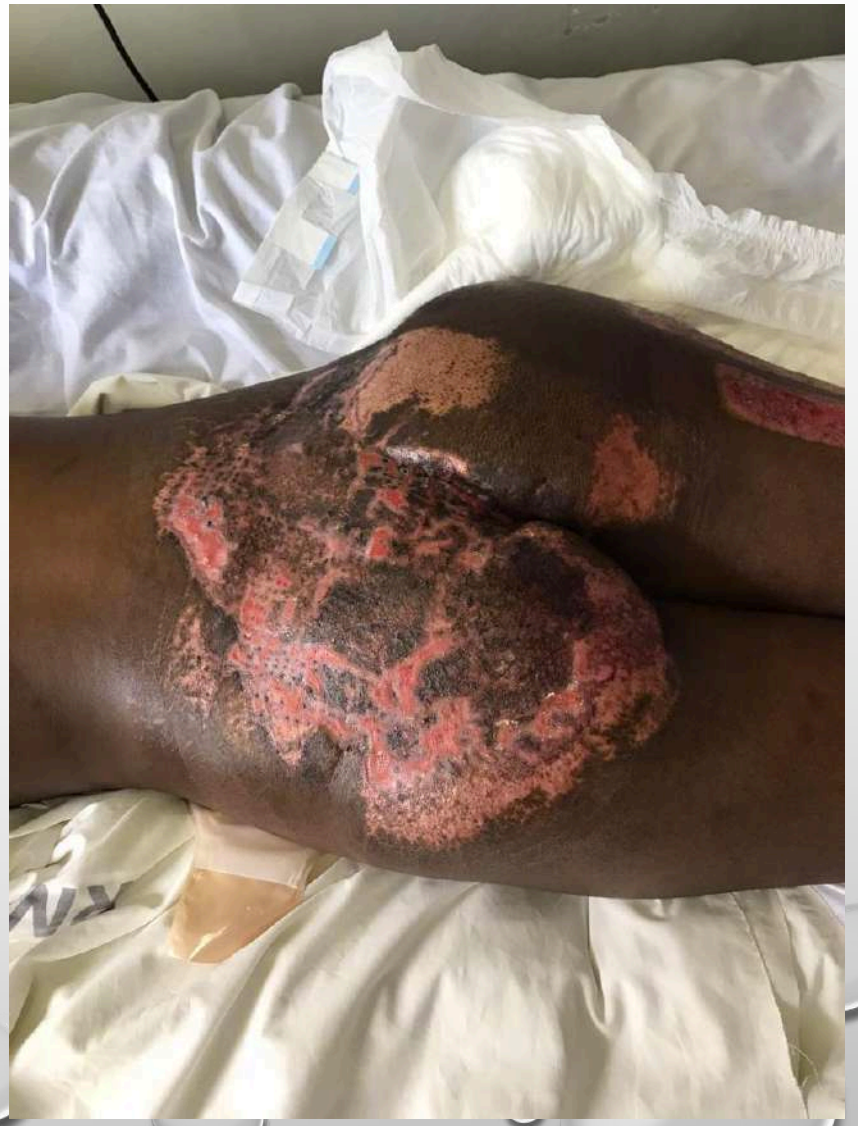

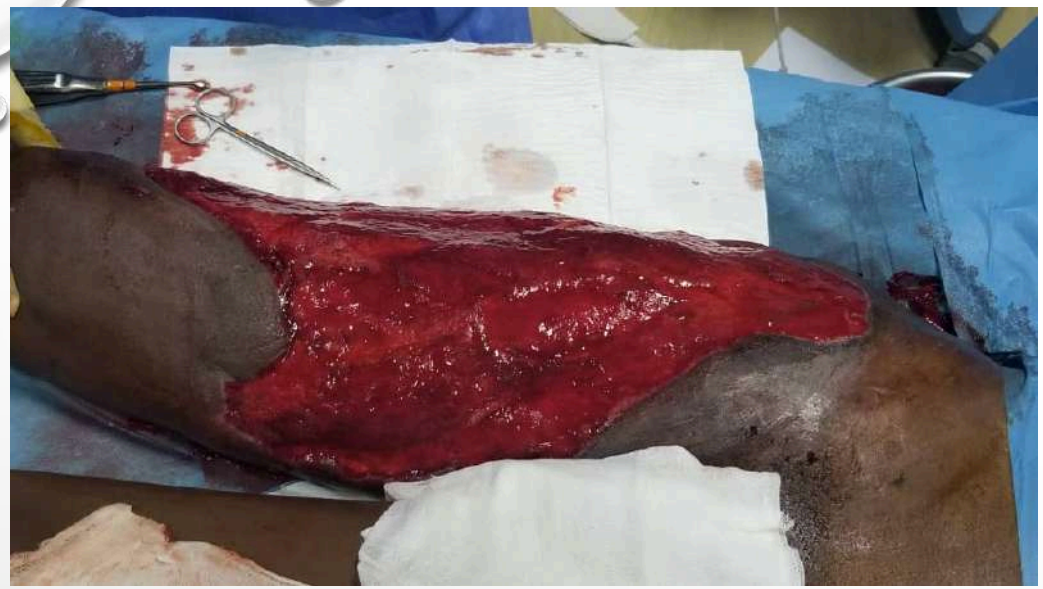

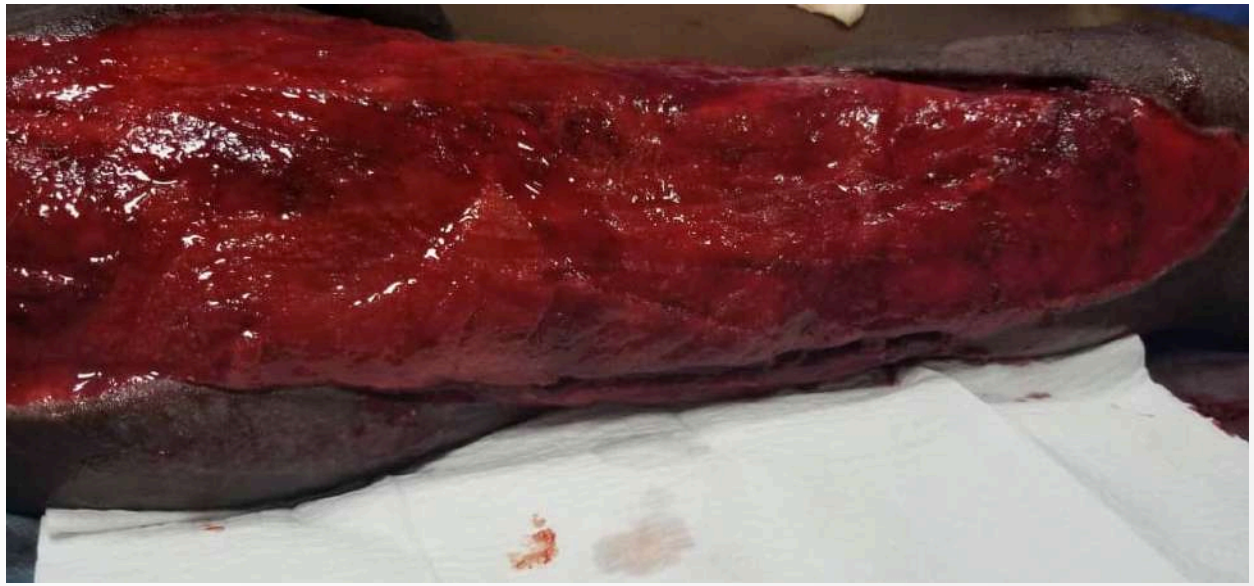

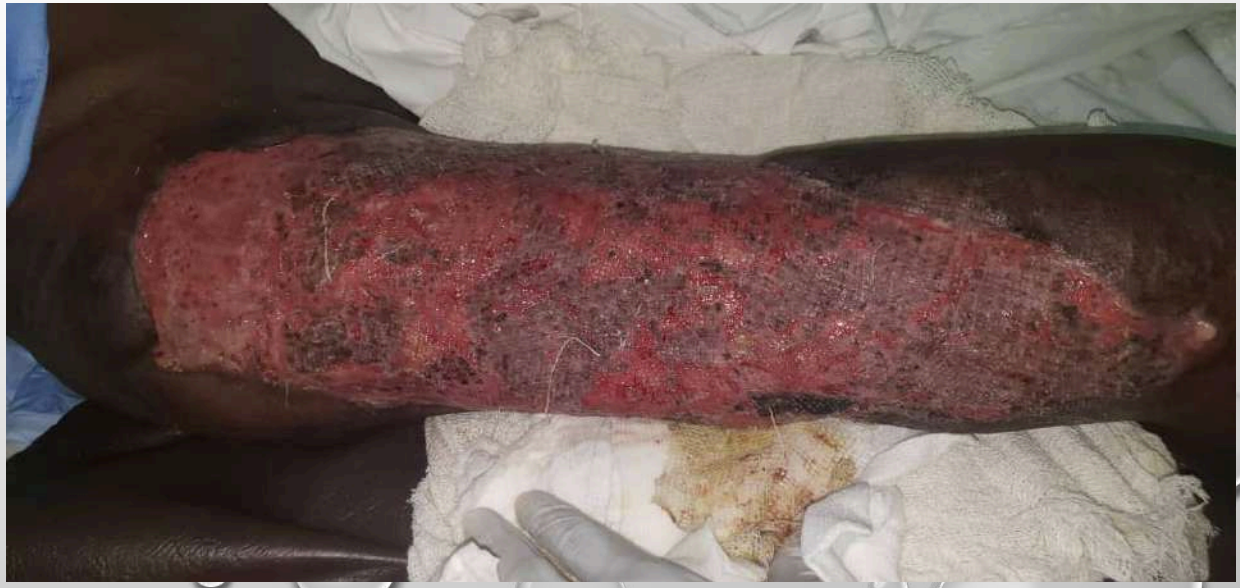



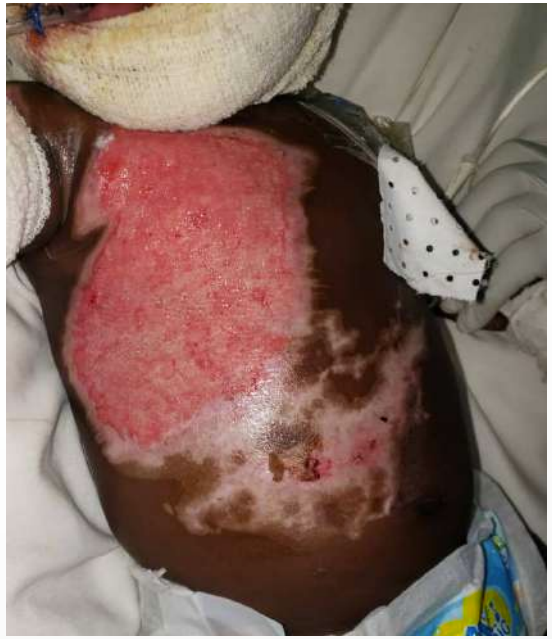
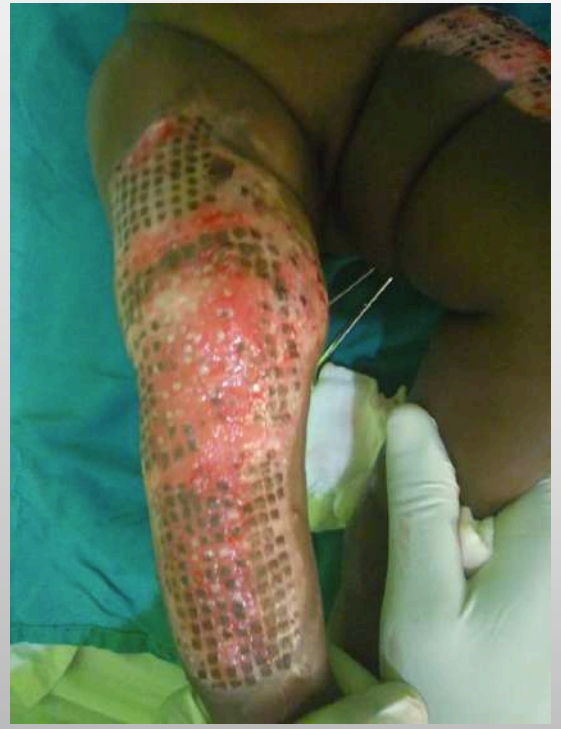

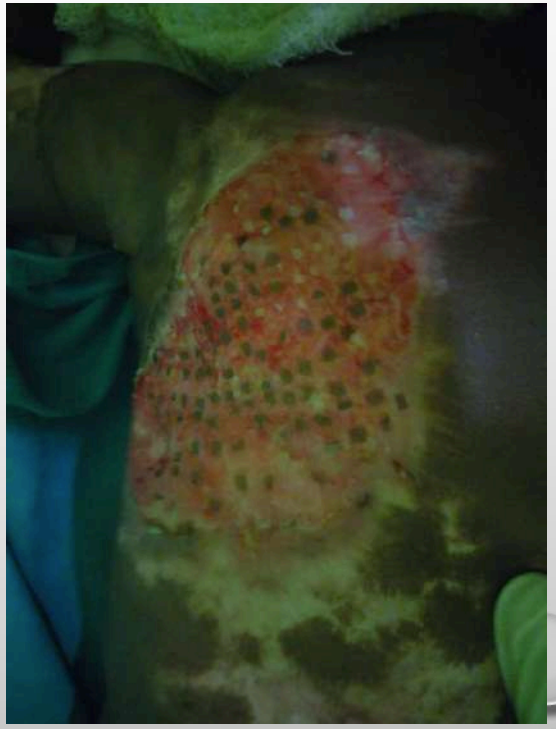
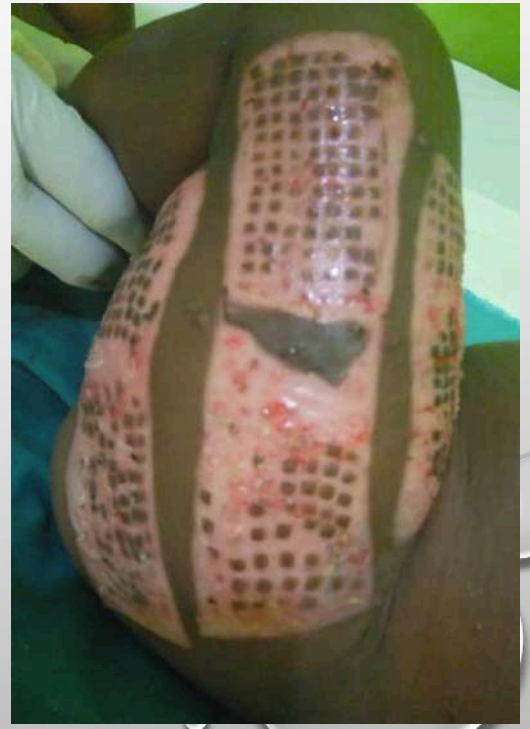

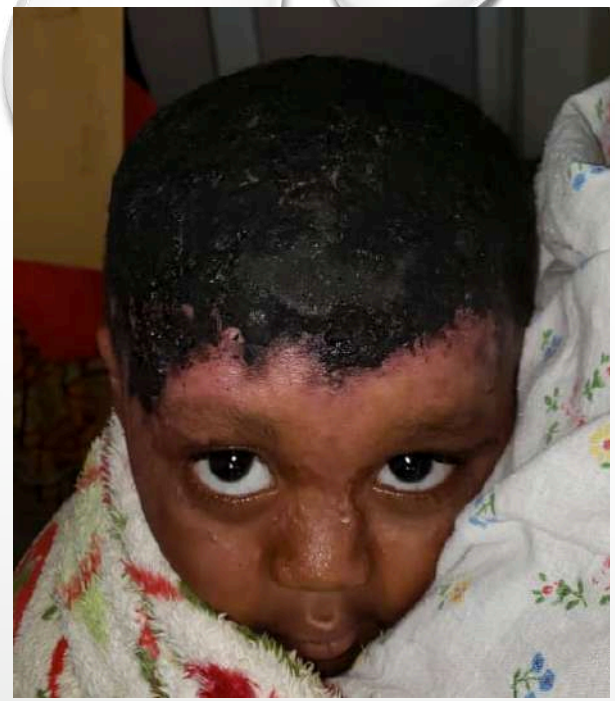

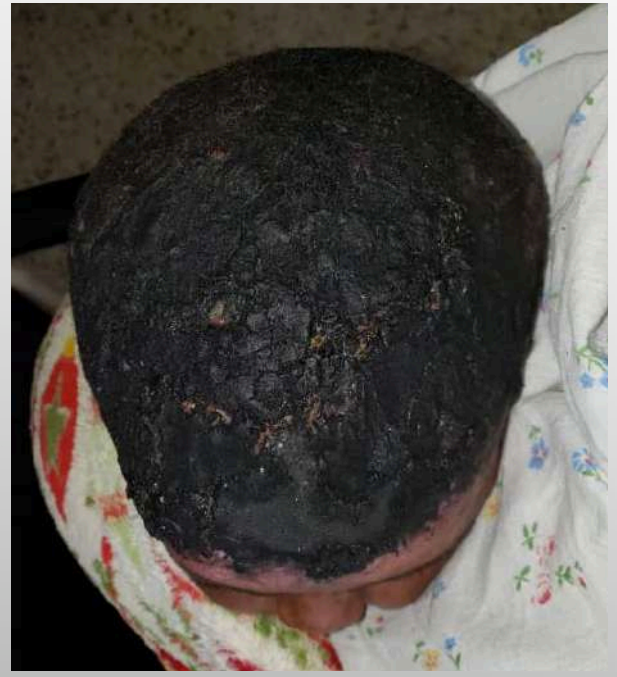

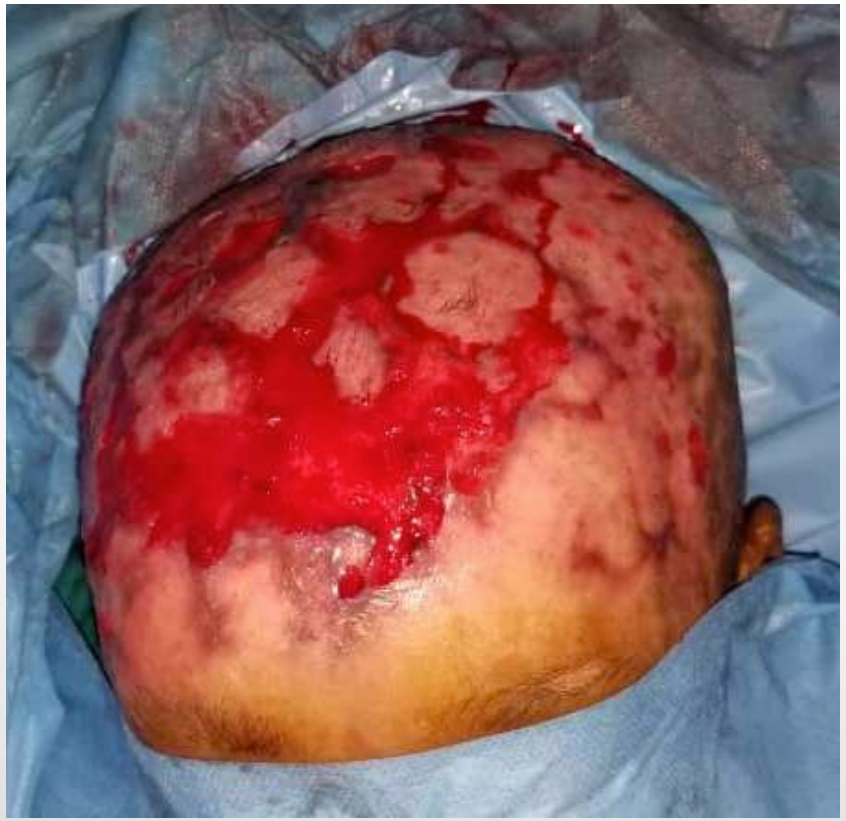

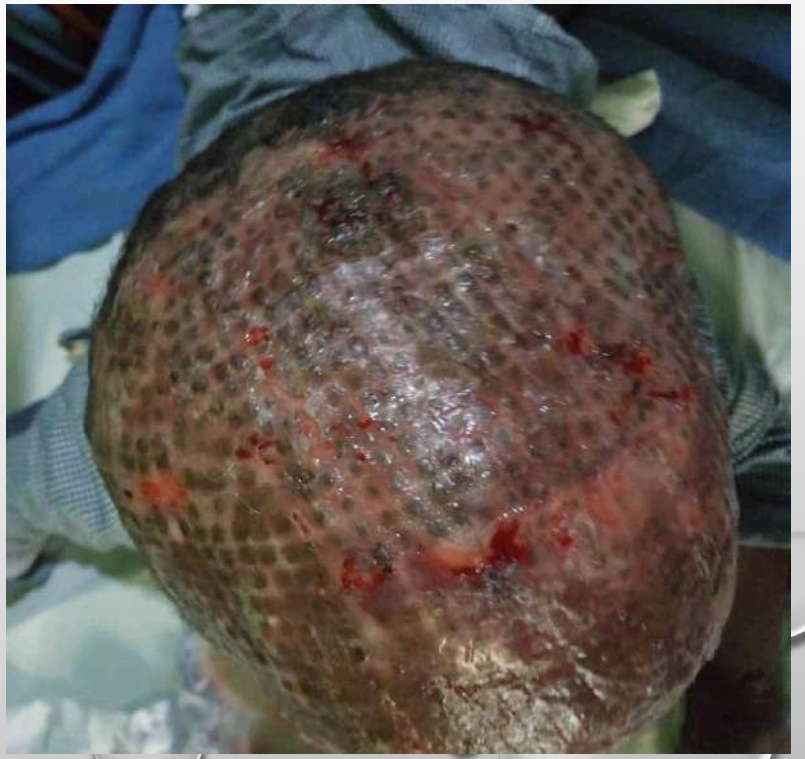

CONCLUSION

- WITH THIS TECHNIQUE, WE HAVE BEEN ABLE TO MANAGE SEVERAL PATIENTS WITH EXTENSIVE BURN AND TRAUMATIC BID WOUNDS WITH MUCH LESS DONOR SITE SURFACE THAN THE MESHING TECHNIQUE WOULD HAVE REQUIRED
- THIS ALLOWS FEWER SURGERIES, LESS HOSPITALIZATION TIME AND AT THE END THE TECHNIQUE TURNS OUT TO BE LESS COSTLY OVERALL
- WE ARE STILL IN THE LEARNING CURVE PERIOD, BUT SO FAR THE RESULTS ARE POSITIVE AND PROMISING
- BEFORE WHEN ENCOUNTERED WITH AN EXTENSIVE WOUND, WE WOULD BE DEPRESSED DUE TO LACK OF OPTIONS, NOW WE ARE ABLE TO PROVIDE AN ADEQUATE AND GRATIFYING SOLUTION WITHIN NOT MORE THAN A COUPLE OF WEEKS.

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- OR TEAM
- ICU TEAM
- PLASTIC SURGERY TEAM

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QUESTIONS / COMMENTS ???

THANK YOU!

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