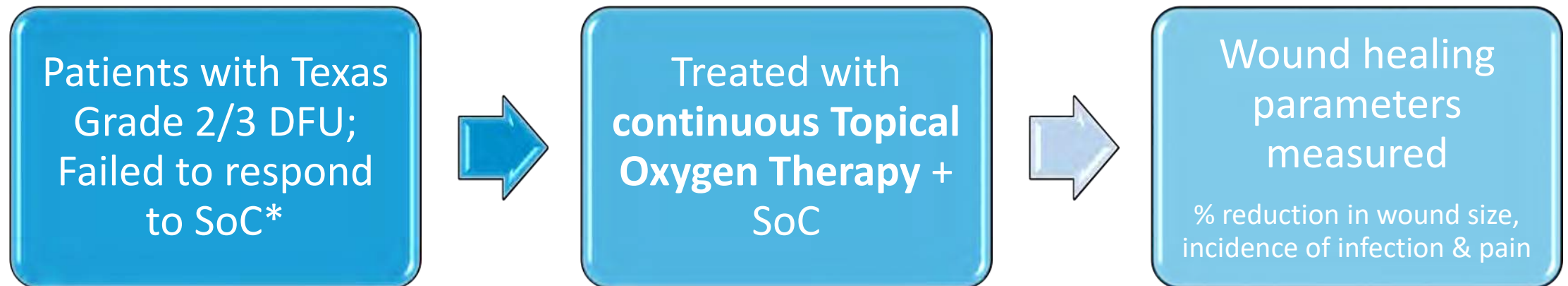


CASE SERIES EXAMINING THE EFFICACY OF CONTINUOUS TOPICAL OXYGEN THERAPY IN THE TREATMENT OF DIABETIC FOOT ULCERS

Prof Harikrishna KR Nair S.I.S. KMN MD FRCPI FCWCS FMSWCP CMIA CHM | Wound Care Unit, Dept of Internal Medicine, Hospital Kuala Lumpur

AIM: To determine the efficacy of continuous oxygen therapy in the treatment of previously non-healing diabetic foot ulcers (DFU) where the majority of patients had a history of infections and prior amputations indicative of the severity and difficulty in healing.

CLINICAL OBSERVATIONAL STUDY PROTOCOL:



**SoC in these cases was an absorbent foam dressing*

Patient 1

53-year-old male | Wound duration 2 weeks
Right foot DFU: status post hallux amputation



Day 0

7cm x 5cm

Pain Score = 0



Day 12

7cm x 4.2cm



Day 31

4.5cm x 2cm



Day 45

2cm x 1cm



Day 59

0.4cm x 2cm



Day 66

Healed

Patient 2

51-year-old male | Wound duration 1 month
Left foot DFU: status post ray amputation, 4th toe, due to infection



Day 0

7cm x 5cm

Pain Score = 2



Day 14: 5.8cm x 4cm

Pain Score = 1



Day 49

6cm x 4.1cm



Day 70

Pain Score = 0



Day 81

2cm x 0.8cm



Day 111

Healed

Patient 3

72-year-old male | Wound duration 1 month DFU- Left medial malleolus | Moderate yellow exudate



Day 0

4.5cm x 1.8cm

Pain Score = 1



Day 45

3.1cm x 2cm



Day 58

2cm x 1cm



Day 65

1.5cm x 1cm

Pain Score = 0



Day 75

1cm x 0.5cm



Day 106

Healed

Patient 4

61-year-old male
DFU- Right lateral forefoot
Wound duration 7 months

Day 0

1cm x 1.8cm

Pain Score = 0



Day 12

0.2cm x 0.2cm



Day 19

Healed



Patient 5

50-year-old male

DFU- Left limb cellulitis | History of limb cellulitis

Wound duration 2 months



Day 0

1.5cm x 0.7cm

Pain Score = 0



Day 14

0.5cm x 0.2cm



Day 28

Healed

Patient 6

74-year-old male | History of 2,3,4 & 5 toe amputation

DFU- Left lateral foot & ankle

Wound duration 2 months



Day 0

22cm x 4.5cm

Pain Score = 1



Day 36

21cm x 3.5cm



Day 46

19cm x 2.5cm



Day 61

15cm x 2.5cm

Pain Score = 0



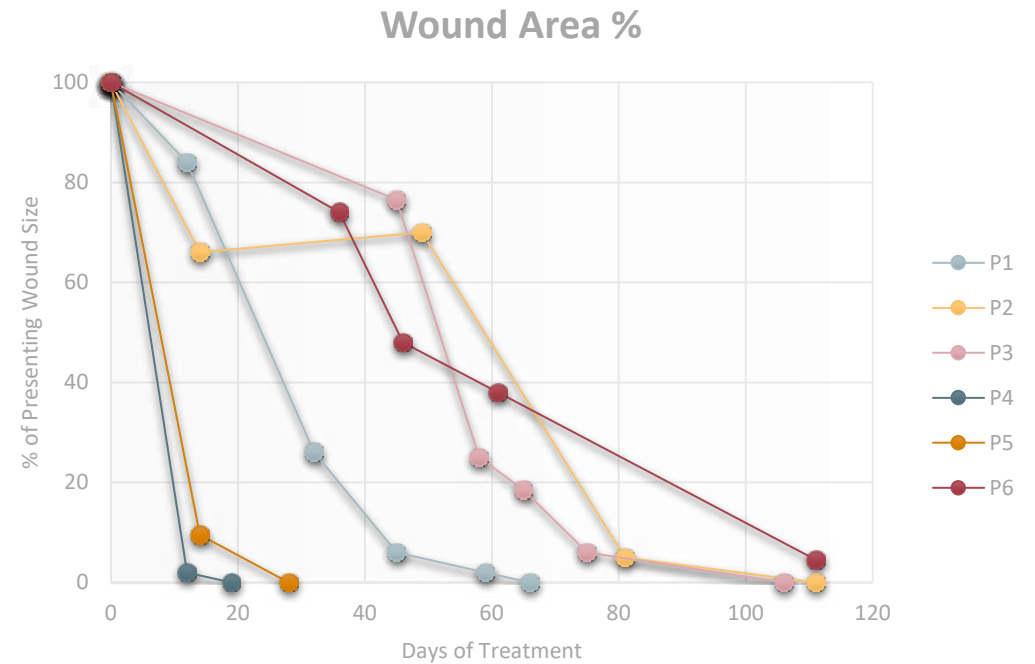
Day 111

3cm x 1.5cm

RESULTS:

This study followed 6 patients. In all cases, the wounds progressed, as demonstrated by significant wound area reduction. This indicates that these wounds were now on a healing trajectory.

Moreover, 3 of the cases healed within the 12-week study period. In the subsequent 4 weeks, 2 further patients healed. The 6th patient, who had an extremely large wound, achieved a 95% reduction in wound area.



CONCLUSION:

This study supports previous findings which have demonstrated the beneficial effects of a continuous topical oxygen therapy in the treatment of especially hard-to-heal DFUs.

Continuous topical oxygen therapy (cTOT*) was found to improve clinical outcomes and stimulate wound healing in wounds that were previously stagnated with standard of care.

This project was carried out by Wound Care Unit, Dept of Internal Medicine, Hospital Kuala Lumpur and funded by Inotec AMD Ltd.

*cTOT provided by Oxygen Delivery Device NATROX® O₂