

A Case Series Demonstrating the Use of Topical Wound Oxygen On Challenging Lower Extremity Wounds Presenting to A Community-Based Outpatient Clinic

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Purpose

This retrospective case series evaluated wound closure and overall progress in challenging lower extremity ulcers when incorporating Topical Wound Oxygen (TWO₂) with advanced dressings, off-loading and other adjunctive treatments. Although the use of TWO₂ has been available at VA facilities, it was first added at our CBOC 6 months prior to this review. Since this addition, the Veterans treated appear to have achieved expeditious wound improvement and have provided consistent positive feedback on symptoms and progress when TWO₂ was added to their plan of care.



Methods

A retrospective chart review of 9 patients with a total of 14 lower extremity wounds was completed. The mean patient age was 67 and 8 out of 9 had a diagnosis of diabetes. All had co-morbidities which lead to additional challenges in healing. One third had a previous amputation and 4 had more than 1 wound. TWO₂ was often initiated at documentation of wound stalling despite standard of care including debridement, infection management, off-loading and appropriate dressings. TWO₂ was set up in the home and treatment was provided with dressings in place for 90 minutes/day with cyclical oxygen pressures of 10-50mb pressure. Seven patients had a cellular/ tissue-based product used in conjunction at some point during treatment.

Results

At data collection 8 wounds have come to closure, 1 was lost to follow-up at 85% closure on week 10, 2 have not yet reached 12 weeks of treatment and 3 remain open at 12 weeks. There was an average percent area reduction (PAR) of 79.36% (N=14) at 6 weeks of therapy and of 91.3% (N=11) of those with data at 12 weeks.

Conclusions

TWO₂ has had a positive impact on PAR and wound closure in a challenging subset of patients with multiple comorbidities. Additional studies on this population are warranted.

Key Points:

- Review of 14 lower extremity wounds having received TWO₂
- All were at risk for amputation with 1/3 of patients having had a previous amputation
- TWO₂ therapy was provided in the patients' homes 90 min/day
- Significant improvements noted in wound size after initiation of TWO₂
 - Average % area reduction at 6 weeks- 79.36%
 - Average % area reduction at 12 weeks- 91.3%

Average Percent Area Reduction Over Time

