**Objective**

To demonstrate the use of Continuous Diffusion of Oxygen (CDO) for the treatment of a complicated chronic wound ulcer after a patient on multiple medications had impeded wound healing.

**Background**

Chronic wounds affect over 6 million people and account for over 20 billion dollars of annual medical spend. These wounds are a significant source of improper contracture, cellulitis, dehiscence, and increased risk of skin graft failure. Balanced dressing (consisting of calcium alginate and/or foam dressing) depending on amount of exudate. Silver dressings, skin grafts, debridements and other advanced dressings with virtually no change in dimensions in conjunction with a dressing that maintains a moist wound environment.

**Case Presentation**

A 74 year old male with a chronic venous stasis ulcer for over six months. Past medical history included renal cell cancer, prostate cancer, history of multiple radiation treatments, antiphospholipid syndrome, and platelet dysfunction defect with chronic nosebleeds. In reference to his Antiphospholipid syndrome he has had at least 8 DVT's, a few PE's and had an IVC filter in place. He has had 3-4 asymptomatic strokes that were discovered on imaging. He was also treated for thrombocytopenia, iron deficiency anemia, including IV iron approximately 4 nose bleeds a week, which range from a slight trickle, to a significant bleed. Last significant bleed was about a year ago. He is also treated for thrombocytopenia, iron deficiency anemia, including IV iron approximately 3-4 nose bleeds a week, which range from a slight trickle, to a significant bleed. Last significant bleed was about a year ago.

**Results and Discussion**

Prior to treatment with CDO therapy, the wound was relatively unresponsive to other therapies. Upon application of CDO, the wound responded quickly, with a dramatic reduction in pain in a painless crater shaped area. Multiple unanticipated benefits to this wound had been made with a variety of adjunctive therapies including compression therapy and various topical agents. CDO therapy was administered and the wound healed in 77 days after initiation of treatment.

**Method**

Multiple adjunctive therapies were applied to the wound over a six month period including layer compression dressing, skin grafts, dressings, and other advanced dressings with virtually no change in dimensions resulting in improper contracture, cellulitis, dehiscence, and increased risk of skin graft failure. Continuous oxygen therapy (CDO) offers several breakthroughs in oxygen therapy. It provides continuous oxygen therapy, which is usually applied beneath the compression to aid healing, comfort and to control exudate while maintaining a credible body of clinical evidence. The use of oxygen therapy for treatment of wounds is a viable option and should be considered as part of any formulary for advanced wound treatment.

**Conclusion**

CDO therapy has been shown to be safe and efficacious on a wide variety of wounds. Overall, our findings are in line with a significant body of experimental data reporting that increasing oxygen supply to diabetics and burn patients enhances wound healing.

**References**