

# Silver Dressings Used With Wound Vacuum Assisted Closure: Is There an Advantage?

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Forty consecutive patients with chronic wounds associated with tissue defects of the legs and feet were treated with vacuum assisted closure (VAC)\*. The VAC dressing was placed over a newer silver plated fabric dressing\*\*. An additional forty similar consecutive patients with comparable wounds were treated with vacuum assisted closure over an inert knitted viscose rayon dressing.

Wounds were present for two months or more, had a prior history of one or more episodes of sepsis referable to the wound and had failed to heal with standard moist wound healing treatments including maintenance sharp debridement. All wounds had a history of colonization by methicillin resistant staphylococcus aureus, vancomycin resistant enterococcus or both. Wound sizes averaged 12 cubic centimeters in the silver group and 10 cubic centimeters in the non silver dressing group. The newer silver dressings used a more porous fabric configuration than previous silver dressings.

Early in the study we found that vacuum dressings over the silver fabric configuration could be changed every five days rather than the usual three and that the silver plated fabric could be use for ten days before being discarded. Therefore dressings were changed every three days in the non-silver and every five days in the silver group. Wounds were treated for three months or until healed.

**Despite the fact that wounds in the silver group averaged 10-20% larger than the non-silver group, thirty-five of the wounds in the silver group healed primarily at three months and only 20 patients healed in the non-silver group.**

**No further infections were seen in the silver group, while 6 were seen in the non-silver group.**

**Silver dressings, which can be reused for 10-15 days with VAC, appear to allow (possibly promote) faster healing than comparable wounds similarly treated without silver. Less frequent dressing changes and fewer infectious complications also provided medical and economic advantages.**

\* Kinetics Concepts Inc., San Antonio, TX 78230

\*\* Silverlon™, Argentum Medical, LLC., Willowbrook, Illinois 60527

#### References

- Burrell RE. A Scientific Perspective on the Use of Topical Silver Preparations. *Ostomy Wound Management* 2003, 5A:19-24.  
Joseph, E., et al. A prospective randomized trial of vacuum assisted closure versus standard therapy of chronic nonhealing wounds; *Wounds*, 2000; 12(3): 60-7.  
Carson SN, et al. Vacuum assisted closure used for healing chronic wounds and skin grafts in the lower extremities. *Ostomy Wound Manage* 2004; 50(3) 52-58.



**Figure 1.** Left to right, progression of healing after debridement, far left, to right, almost healed. Silver and VAC used, 46 days. Wound debrided far left 180 days after injury resulting in eschar and tissue loss, note tendons in picture.



**Figure 2.** Coronary artery bypass, vein harvest site at 70 days in an ischemic patient. After debridement and VAC with silver, 20 days right.



**Figure 3.** Left to right, a left ankle wound in a 85 year old ischemic patient with severe cardiac disease, progression of healing after 3 months of VAC and silver.

Patient Population	No Silver N=40	Silver N=40
Age	16-90 years	15-89 years
Male	21	21
Female	19	19
Diabetes	18	18
Tobacco use	7	7
Renal failure	5	5
Ischemia ABI between 0.5 and 0.8	12	12
Wound areas	AV=10cc	AV=12cc