

# Reducing Bacterial Loading and the Effect on Wound Healing with Suprasorb<sup>®</sup> X+PHMB

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**Introduction:** It is the experience of the Eastbourne Wound Healing Centre (WHC) that when colonisation and pH is reduced, 85% of the wounds will rapidly heal and the WHC is in the process of investigating reduction of pH and bacteria with Suprasorb<sup>®</sup> X+PHMB. Suprasorb<sup>®</sup> X+PHMB is the only moisture-regulating wound dressing containing polyhexamethylene biguanide at 0.3%, a broad spectrum antimicrobial known to be effective against MRSA<sup>[1]</sup>. In 80% of cases the bacterial load of critically colonised wounds is significantly reduced with Suprasorb<sup>®</sup> X+PHMB<sup>[2]</sup>. It has a cooling effect which can reduce pain in the wound and is also atraumatic on removal<sup>[3]</sup>.

**Methods:** The plan is for 10 case studies with the patients being seen at least twice weekly, swabbed weekly, with pH and photographs taken on every visit. This poster will present 2 of those case studies.

**Results:** Each wound was reviewed very soon after the first application and, in each case, the dressing had remained hydrated under the bandaging and was atraumatic on removal. Each wound bed had improved, with a reduction in the amount of devitalised tissue and an increase in the granulation tissue. There was also a reduction in the overall size of each wound. Overall, the pH readings had lowered to an alkaline reading of an average of 6.5 and the wound swab results also reduced in each case.

**Conclusion:** Suprasorb<sup>®</sup> X+PHMB resulted in improvements within the wound bed and reduced bacterial load.

For the evaluation of this dressing wound swabs were obtained and the pH of the wound measured. This was to evaluate if there was reduction in bacterial load within the wound bed.



Wound at first assessment

After three days using Suprasorb X+PHMB

**Case study 1:** PF is an 83 year lady who has a long standing venous leg ulceration of the left leg. She has a history of chronic renal disease and hypertension.

On first application the wound measured approximately 13cm<sup>2</sup> and was mixed at approximately 90% devitalised tissue and 10% granulation tissue. The peri-wound region, although fragile, had evidence of epithelialisation. The pH of the wound measured 7 and the swab result showed +++ mixed skin flora.

The dressing was changed and the wound reviewed after 3 days. The dressing had remained hydrated under the bandaging and foam and was atraumatic on removal. The wound bed had improved with a reduction in the amount of devitalised tissue and an increase in the granulation tissue to a ratio of approximately 60/40. There had also been a reduction in the overall size of the wound to 9.4cm<sup>2</sup>.



Wound at first assessment

Reduction in colonisation

Noticeable peri-wound improvement

Wound depth reduced. The wound continued to heal.

**Case study 2:** CM is a 69 year lady who has a history of long standing bilateral venous leg ulceration, which frequently has high levels of exudate resulting in management problems. There is also heavy colonisation which seems resistant to most antimicrobials used previously on the wound. The surrounding tissue was macerated and inflamed and the wound was 0.5cms in depth. Within 10 days, the wound was level with the surrounding tissue no longer inflamed. The wound continues to heal.

**Conclusion:** Suprasorb X+PHMB provided an ideal wound healing environment in these 2 case studies. This provides an excellent basis for the further case studies.

**References:** 1. Mulder GD, Cavorsi JP, Lee D (2007) Polyhexamethylene biguanide (PHMB): An addendum to current topical antimicrobials. Wounds 19 (7): 173-82  
2. Mosti G, Mattaliano V, Schmitz M (2007) Infected chronic wounds – a challenge for the therapy – First Italian clinical results with a new antimicrobial wound dressing containing polihexanide. Extended abstracts of the L&R symposium, EWMA conference, Glasgow.  
3. Kingsley A, Tadej M, Colbourn, Kerr A, Bree-Asian C (2009) Suprasorb X + PHMB: antimicrobial and hydrobalance action in a new wound dressing. Wounds UK 5 (1):72-77