

MANAGEMENT OF A FUNGAL INFECTION USING A BACTERIA AND FUNGI BINDING DRESSING*

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Introduction

An 81 year old male was admitted to hospital following a cerebrovascular accident resulting in a left sided hemiparesis with dysphagia. After 6 weeks of in-patient care, the patient's rehabilitation was interrupted by a *Clostridium difficile* infection, that was superimposed by a severe intertriginous fungal infection of the natal cleft extending anteriorly to the scrotum and inner thighs.

The *C. difficile* infection was managed successfully with Vancomycin, however, stool frequency and consistency proved troublesome for the management of the evolving fungal infection of the natal cleft. Deterioration of the fungal infection, skin breakdown and failed attempts of management with an anti-mycotic cream (2 week treatment with Miconazole Nitrate 2%) left the patient in considerable discomfort. Figure 1. shows the infection at day 0 with a bacteria and fungi binding dressing*.

Results

After 24 hours of management with a bacteria and fungi binding dressing* (Figure 2) the patient reported a significant reduction in pain and an observed reduction in skin redness (Figure 3). The difficulty in maintaining complete control of the infection continued as the *C. difficile* infection was treated. The management of the infection using a soft cotton based dressing was described as simple by the nursing staff, painfree for the patient and effective in its result (Figure 4).

The management of the patient with the selected dressing continued post day 20 with infection recurrence realised given continued antibiotic management and a background of diabetes mellitus type 2.

References

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2. Johansson, A, Ljungh, Å, Apelqvist, J. *Open study on the topical treatment of interdigital fungal infections in diabetic patients.* J Wound Care. 2009 Nov;18(11):pp 430-473.
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* Sorbact® Ribbon Gauze, ABIGO Medical Sweden.

Aim

The aim of this case study was to evaluate the effect of a bacteria and fungi binding dressing* in the management of a severe intertriginous fungal infection.

Fungal infections are becoming a more widespread problem in long term aged care, Intensive Care Units and the normal hospital setting. With the increasing burden of diabetes mellitus type 2, the ageing population and the overuse of antibiotics it is anticipated that fungal infections will increase in prevalence.



Figure 5. Wound bacteria and fungi bind to bacteria and fungi binding dressing*: *Candida albicans* (orange)³.



Figure 1. 28 September 2013 - Day 0 .



Figure 3. 29 September 2013 - after 24 hours.

Methods

The patient received application of the cotton based bacteria and fungi binding dressing* daily. Frequency of stools and the location of infection dictated multiple dressing changes were required during the initial phase of management.

The management with creams and ointments ceased prior to commencing management with the selected bacteria and fungi binding dressing*.

Conclusion

The bacteria and fungi binding dressing* operates by binding wound micro-organisms that would otherwise impede normal wound healing. The mechanism of action is based upon the physical principle of hydrophobic interaction¹ and does not rely upon the deposition of bactericidal chemicals or endogenous toxins to the wound bed. (Figure 5) The literature base is increasing to support ointment, cream and chemical free alternatives to the management of interdigital and intertriginous fungal infections.²⁻³

This individual case study has demonstrated quite effectively how a bacteria and fungi binding dressing* can value add in the management of a recalcitrant fungal infection. The author is hopeful this case can lead to larger clinical studies in the area.



Figure 2. Management with a fungi binding dressing



Figure 4. 18 October 2013 – Day 20