

adherent dressing as a treatment for

**superficial wounds infected with
methicillin resistant Staphylococcus
aureus (MRSA).**

Veronica Balmforth, Nurse Leader, Bradford Community

Trust, St Catherine's Home, Manningham, Bradford.

MRSA in the community

INTRODUCTION

Since the 1960s the cases of methicillin resistant Staphylococcus aureus (MRSA) have steadily increased. The number of cases in Bradford increased after the Bradford City Football Club fire disaster in 1985. Surgeons from all over the country came to work in the operating theatres, each possibly carrying different strains of MRSA. The bacteria is to be found hospital wide and indeed cases are reported within the community in patients who have never been into hospital.

The skin and the anterior nares can be colonised with MRSA without showing signs of clinical infection. "However, if the organism gains access via a portal of entry it can cause serious systemic infection." (Phillips and Young 1995).

The most common mode of transmission is on the hands of staff. Taylor (1978 a,b) has researched extensively into the subject of nurses' hand washing practices. This topic has to be revisited on each occasion that infection control courses are planned for nurses. Lack of time to effect good hand washing techniques is observed (Sui 1994). The benefits of handrubs which are alcohol based, provide a cumulative effect described by Gould (1992). The use of agency staff, the movement of staff to different areas and the transferring of patients around the hospital increase the risk of cross-infection. Infection Control Policies are provided and supported by education in the Bradford Community Trust. Nursing homes and the community are included in a discussion by Perry (1996). The case studies in this poster involve these areas.

WOUND CARE

Wounds are a portal of entry for organisms. Both acute and chronic wounds may be infected with MRSA. Antiseptics are not used for wound cleaning due to their effect of slowing down the healing process, as researched by Leaper and Brennan (1985). However, topical antiseptics have been used to some effect in the treatment of MRSA infected wounds. Due to the nature of their action, resistance to these products is less likely to occur.

INADINE is one such product, impregnated with a solution of 10% povidone iodine which is an iodophor. The benefit of iodophors, compared to aqueous solutions, is that they are much less irritant, since iodine crystals are not deposited on the skin. Skin irritation is therefore rare, even in patients otherwise sensitive to iodine.

As with all woundcare products, caution in the use of iodine based products is advised (Griffiths-Jones 1995) therefore prescribing information should be read before use.

COST EFFICACY

Fundholding in the community has increased awareness of the need to select treatments that are not only appropriate clinically but also cost effective. The use of INADINE* fits this criteria. The table below details the relative costs* of treatments that could be used on superficial wounds infected with MRSA.

<i>INADINE povidone iodine non adherent dressing</i>	<i>9.5cm x 9.5cm</i>	<i>39p</i>
<i>Silver sulphadiazine cream</i>	<i>50g tube</i>	<i>£4.30</i>
<i>Mupirocin ointment</i>	<i>15g tube</i>	<i>£4.71</i>

CASE STUDY 1

Patient: Female, aged 63, living in a nursing home for the disabled.

Diagnosis: Self neglect

Medication: Fluoxilene, Metachlorpropamine, Canestan cream, Dihydrocodeine.

11.3.96 New, small abdominal wound which had broken down slough. Cleansed with saline. INADINE secured with an adhesive, absorbent dressing. The wound and her wrist swabbed MRSA positive. The dressing was renewed as required. Nutritional supplements were given as the patient would not eat.

15.3.96 Dressing renewed.

18.3.96 Dressing renewed.

28.3.96 Wound healed.

CASE STUDY 2

Patient: Female, aged 84, at home.

Diagnosis: Total knee replacement on 2.4.96. 16 days later wound inflamed and discharging slightly.

Medication: Cephalixin 500mg QDS. After 1 week swab sent. MRSA positive.

14.4.96 Discharged from hospital.

18.4.96 Wound clinic. Less inflammation. No infection clinically. No pain. Continued Antibiotics and referred to Infection Control Team. Swabs taken from nose and axilla proved positive. INADINE* applied.

29.4.96 Wound healed.

CASE STUDY 3

Patient: Male, aged 82, at home but has respite care at St. Catherine's Home.

Diagnosis: Above knee amputation. Peripheral Vascular disease. Diabetic-diet controlled. MRSA Carrier - previous wound colonisation.

Medication: Dothiepin, Ferrous sulphate, Burinex A, Co-Proxamol, Canestan cream, Temazepan.

24.5.96 Necrotic ulcer to inner aspect of metatarsal head of great toe on right foot. Surrounding tissue red and inflamed.

25.5.96 Enzyme debrider applied - daily dressings.

1.6.96 Dressed with chlorhexidine tulle.

18.8.96 Commenced treatment with INADINE*.

19.8.96 Swab taken. INADINE* continued until discharge.

6.9.96 Discharged home for short period before readmission for surgery.

16.9.96 Wound healing.

In all the case studies INADINE povidone iodine non adherent dressing performed very well in terms of ease of application and ease of removal.

References: 1. Phillips, E & Young, T (1995) Methicillin-resistant staphylococcus aureus and Wound Management, BJN, Vol 4, No22, 1345-1349. 2. Taylor, L.J. (1978) An evolution of handwashing techniques. 1 Nursing Times 74(2): 54-55, 2. Nursing Times 74(3): 108-110. 3. Sui, A.G.K. (1994) Methicillin resistant staphylococcus aureus: do we just have to live with it? BJN, Vol 3, No 15, 753-759. 4. Gould, D (1992) Handwashing in Hospital, Wound Management 2: 14-15. 5. Perry, C (1996) Methicillin resistant staphylococcus aureus, Journal of Woundcare, Jan, Vol 5, No 1. 6. Leaper, D.J. & Brennan, S.S. (1985). The effect of antiseptics on the healing wound; a study using the rabbit ear chamber. British Journal of Surgery 72: 780-2 7. Griffiths-Jones, A (1993). Methicillin resistant staphylococcus aureus in woundcare, Journal of Woundcare, Nov, Vol 4, No 10, 481-483. 8. Drug Tariff, October 1996.