

Inadine dressings

Ian Adams

Inadine is a recent addition to the range of non-adherent medicated dressings. The importance of non-adherence in the management of small wounds has been well documented and in this respect Inadine appears to be better than most dressings.

Constituents

The basic dressing material is a knitted, continuous filament, viscose fabric. This is coated with polyethylene glycol, a widely used water-soluble ointment which provides a bland base for a 10% solution of povidone-iodine. Each dressing is then individually packed and sterilized by γ -radiation.

Povidone-iodine is a chemical compound formed between iodine and a water-soluble polymer (polyvinylpyrrolidone) in which bactericidal properties of the iodine have been retained but most of the undesirable properties of iodine have been removed. The povidone-iodine is much less irritant than iodine and does not cause permanent staining of the skin or clothing. Skin sensitization is rare and many people who have had reactions to aqueous iodine solutions do not show hypersensitivity to povidone-iodine.

Iodine is effective against all bacteria, fungi, viruses and the spores of both bacteria and fungi. Iodine readily oxidizes the proteins which micro-organisms are dependent upon for life. The bactericidal action is very rapid, and as it is always bactericidal resistance does not develop. Povidone-iodine has the same broad spectrum of activity as iodine alone. Although the presence of organic debris will react with iodine and reduce the amount of chemical available for bactericidal use, the effect appears to be negligible at the concentrations used in Inadine.

Use

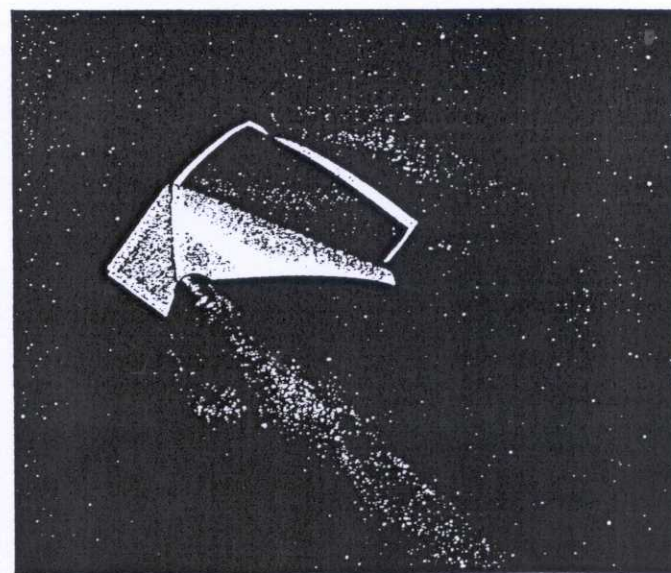
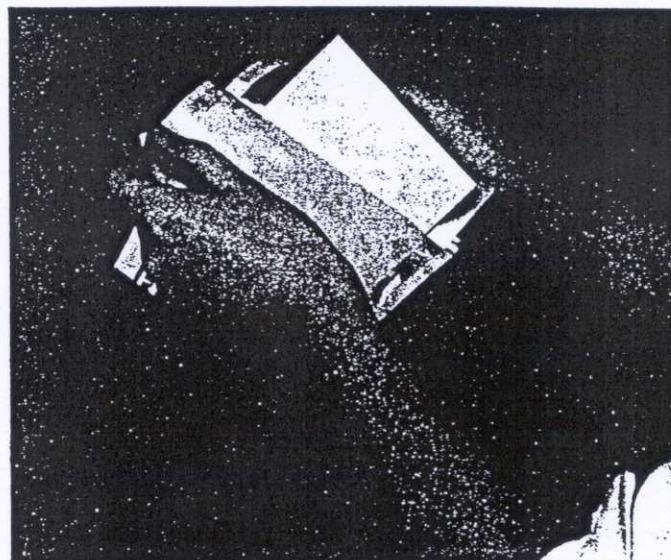
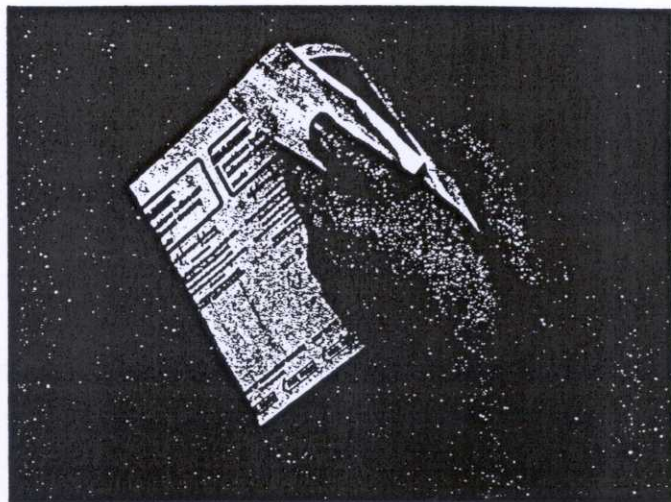
Inadine is intended for use in the prophylaxis and treatment of infection in superficial wounds. The

dressing provides a sustained release of iodine and is designed to prevent colonization by a wide range of bacteria, protozoa and fungi. The povidone-iodine gives the dressing a distinct orange-brown colour which also acts as an indicator of the continuing availability of antiseptic activity. After a variable period, depending on the amount of organic debris on the wound surface, the povidone-iodine becomes used and areas of the dressing become white, a sign that the dressing should be changed.

This visual indicator is of particular benefit to the nurse or clinician. Instead of changing the dressing by rote, it is now possible to see when the dressing should be changed as the antiseptic is used up and the dressing turns white. This will undoubtedly result in subsequent cost savings in terms of dressing costs and nursing time.

Comparison with other dressings
Various forms of relatively inexpensive dressings (e.g. medicated tulle dressings) can be used in the management of minor wounds. However, several of these dressings contain antibiotics which may lead to the development of bacterial resistance, which is particularly important if the antibiotics could be used systemically. Even if the antibiotic is to be used systemically, a resistance can develop and the dressing may also provoke cross-resistance to related antibiotics. Although chlorhexidine is a potent antibacterial agent in aqueous solution, it appears to have little antibacterial effect as a dressing, which may be due to absorption into the fibres of the dressing or the effect of yellow soft paraffin.

Practical experience has shown that a single Inadine dressing can be removed more easily than tulle gras dressings, even when multiple thicknesses of tulle gras are used. Occasionally, Inadine will form a firm layer if left on a wound for several days, particularly if there



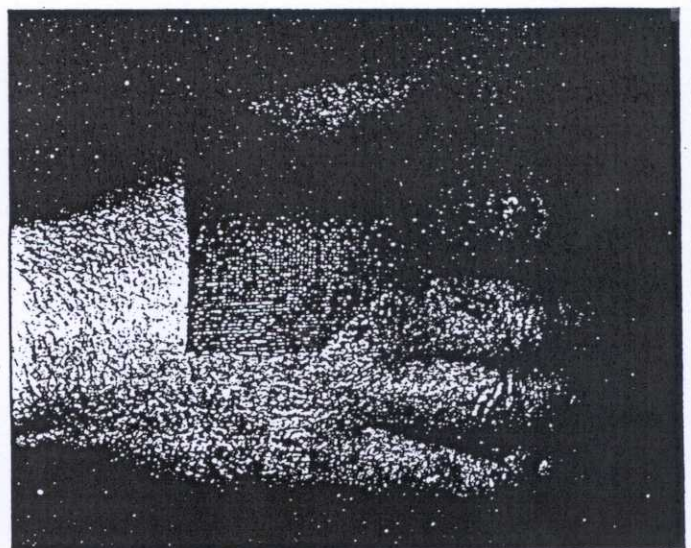
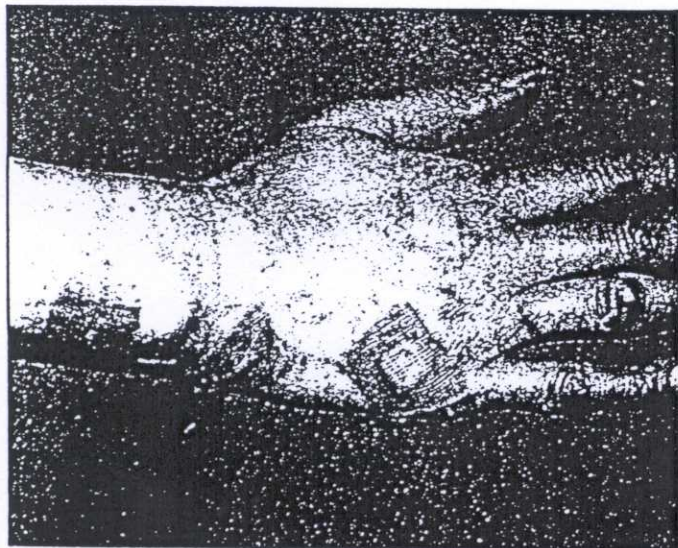
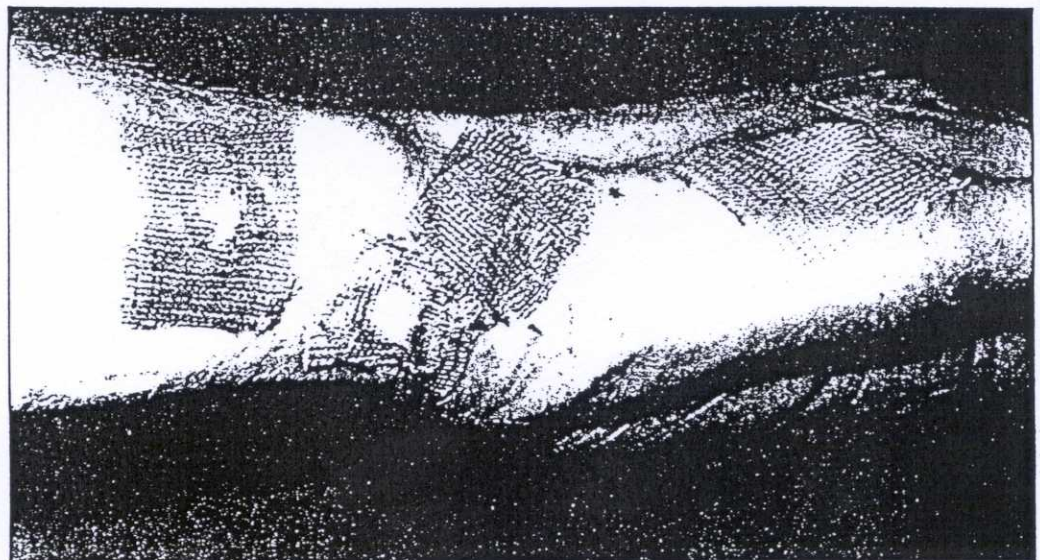
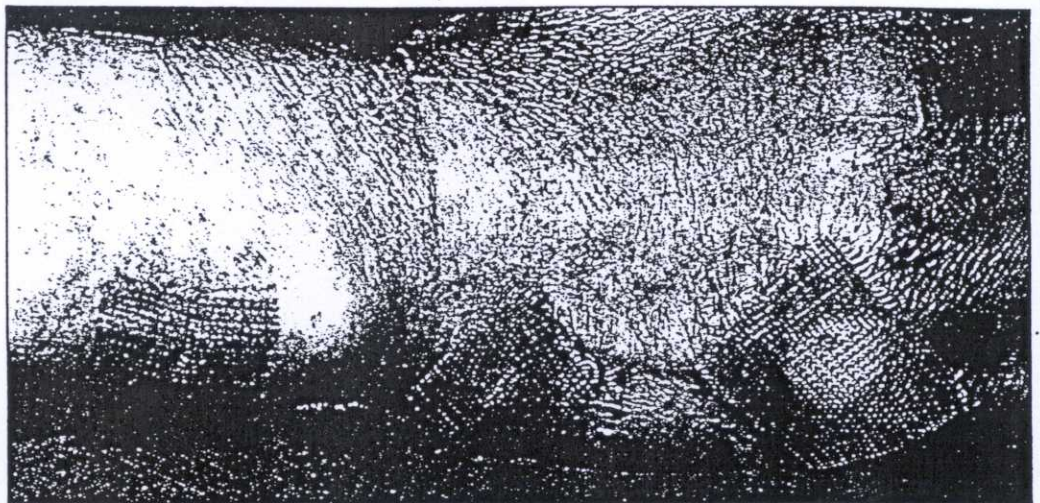
has been a leakage of blood, but even then the dressing can be simply lifted off the wound. Also in contrast to the traditional tulle gras dressings, removal of Inadine allows the wound to be more easily cleaned with water or saline, which is particularly important if there is a possibility of a skin graft. This is because the formulation is water soluble, unlike conventional tulle gras dressings which are soft paraffin based and leave deposits in the wound.

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Ian Adams is Consultant Physician in the A & E Department at St James's University Hospital, Leeds. He trained at Leeds Medical School and was a GP for 16 years before becoming a consultant. He was Medical Officer at Leeds United FC for 15 years and has a special interest in sports injuries.

Further reading

Thomas S, Dawes CE, Hay NP. Improvements in medicated full dressings. *J Hospital Infection* 1983; 4: 391-398.



Figures showing Inadine in use