SMTL Dressings Datacard

Product Name:	**MAGGOTS;**
Classification Name:	**Sterile larvae**
Manufacturer:	**Biosurgical Research Unit**

Description

[*** display ps-maggots ***]

[*** linked maggots-01 ***] Sterile larvae (maggots) supplied for use in wound management are those of the common greenbottle [*** linked fly-01 ***] *Lucilia sericata.* When applied to the wound they are only about 2-3 mm long, but once in place they produce powerful proteolytic enzymes that degrade and liquify necrotic tissue which they ingest as a source of nutrient. Under favourable conditions, larvae rapidly increase in size, reaching 8-10 mm when fully grown. As well as removing slough and necrotic tissue, larvae combat odour and infection by ingesting and killing bacteria present in the wound. It has also been reported that the use of larvae may reduce wound pain and stimulate the formation of granulation tissue.

Indications

Sterile larvae can be used in the treatment of many types of sloughy, infected or necrotic wounds including leg ulcers both[*** linked ul-lu-ve-04 ***] venous, and [*** linked ul-de-g1-01 ***] arterial, pressure sores, [*** linked p-sore-g4-01 ***] burns, and ulcerated areas on the feet of diabetics.

Contra-Indications

Larvae should not be applied to wounds that have a tendency to bleed easily, or be introduced into wounds that communicate with the body cavity or any internal organ. They should also not be applied close to any large blood vessels.

Method of use

It is recommended that a dressing system is used that retains the larvae within the area of the wound. The selected technique will be determined by the nature and location of the area to be treated. In most instances, a hole is cut in a hydrocolloid sheet the size and shape of the wound and the dressing placed securely onto the surrounding skin. If the wound is of limited depth, a double layer of a hydrocolloid dressing may be applied to form a shallow chamber into which the larvae may be introduced.

Once the wound has been prepared, the larvae can be applied. A small volume of sterile water or saline is added to the container which is gently agitated to release the larvae from the sides of the tube. The solution with the larvae in suspension, is poured out onto a sterile piece of nylon net or some other suitable retention material placed upon a sterile gauze swab. The swab is used to draw the liquid away through the retention layer leaving the larvae on the surface. The retention layer is placed larvae side down onto the surface of the wound and taped securely to the hydrocolloid sheet to prevent the larvae from escaping onto the surrounding skin. The retention layer permits free drainage of exudate and allows the larvae to obtain an adequate supply of oxygen.

The young hatchlings are quite delicate and need to be kept moist. If the wound is relatively dry, a swab moistened with saline should be applied over the outside of the net. A suitable absorbent secondary dressing is then applied, held in place with tape or a bandage as appropriate.

Any unused larvae should be disposed of and not retained for future use because they can no longer be considered sterile.

Larvae may prove to be of limited effectiveness if applied to wounds that are covered with dry necrotic epidermis such as black heels. For optimum results this should be removed or hydrated by use of a hydrogel or a hydrocolloid dressing prior to the application of the larvae. Any gel remaining in the wound must be removed before the maggots are applied.

It is recommended that for small wounds, the number of larvae should be limited to about 10 per sq. cm. For larger wounds that contain significant amounts of slough, this ratio is less critical provided the surrounding skin is well protected.

To remove larvae from the wound, the outer dressing is first removed then the hydrocolloid frame and retention layer is taken off as one unit. The majority of the larvae will come away at this time, particularly if the wound is irrigated with a stream of saline. Any larvae that remain in the wound may be removed with forceps. The larvae together with the dressing residues should be disposed of by incineration

Frequency of Change

Larvae should be left on the wound for a maximum of 3 days. At this time they should be removed and the wound reassessed. In the initial stages of treatment there may be a noticeable increase in wound exudate, causing the outer dressing to become discoloured. If exudate production is excessive, the secondary dressing may be changed daily whilst leaving the primary dressing undisturbed. Frequent removal of the outer dressing will also help to control the odour associated with the liquified necrotic tissue.

Warnings

On rare occasions the use of larvae has caused a wound to bleed. For this reason it is recommended that the dressing is inspected daily. If bleeding has occurred the larvae should be removed and the wound re-assessed.

Although some patients have stated that the use of larvae causes a reduction in wound pain, others have reported an increase in pain following their application. This seems to occur most commonly in patients who have wounds associated with ischaemia.

Presentation

Larvae are supplied in a sterile container fitted with a lid containing a filter that is permeable to air, but which prevents the passage of microorganisms.

Storage

The larvae should be used as soon as possible after receipt, preferably within 12 hours. If they are not to be applied immediately, the transit container should be stored in a cool dark place until required for use, preferably at a temperature of 8 - 10 degrees.

If larvae are to be stored in this way, the transit container should be placed in the polythene bag provided. A few drops of sterile water should be added to the bag to maintain a high humidity in order to prevent the larvae from drying out.

Bibliography

1. Thomas S., Jones M., Shutler S., and Jones S., Using Larvae in modern wound management, *Journal of Wound Care*, 1996, **5,** (2), 60-69.

2. Sherman RA., Wyle F., Vulpe M., Maggot therapy for treating pressure ulcers in spinal cord injury patients. *Journal of Spinal Cord Medicine,* 1995, **18,** (2), 71-74.

3. Graham K., The role of maggots in plastic surgery, *Paper presented to 2nd World Conference on Biosurgery,* Porthcawl, 1997,

4. Edwards J., Larval Therapy in Burns, *Paper presented to 2nd World Conference on Biosurgery,* Porthcawl, 1997,

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Revision Details

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Please inform SMTL of any inaccuracies or changes required in this datacard.

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