BELMATT
HEALTHCARE TRAINING

CLASSIFICATION OF DRESSINGS.

ABSORBENT / POSTOPERATIVE DRESSINGS

eg *Gauze, Surgipad*, *Vacutex, Medipore, Mepore, Mepore Ultra, Primapore, Opsite Plus*

Gauze and surgipad tend to have a drying effect, as they will absorb exudate from the wound. Should only be used on clean dry wounds, or as a secondary dressing. Should not be used directly on the surface of a moist wound, as it will cause trauma on removal. *Vacutex* is an absorbent low-adherent capillary dressing, which draws exudate away from the wound into the middle layer of the dressing.

Mepore, Medipore, Primapore are postoperative dressings. Care is required in their application, as over stretching of the borders of the dressing can cause shearing and blistering of the skin. *Opsite Plus (formerly known as Opsite Post-Op)* has an absorbant central pad covered with a semi-permeable film and *Mepore Ultra* is also showerproof, which allows the patient to bath / shower.

ALGINATE DRESSINGS

eg *Sorbsan, Kaltostat, Tegagen, Seasorb Soft, Algosteril, Algisite M, Meglisorb, Sorbsan Plus, Urgosorb.*

These are dry absorbent dressings made from seaweed which contain calcium and sodium salts of alginic acid, which is a polymer composed of mannuronic acid and guluronic acid residues. They form a hydrophillic gel on contact with exudate or blood, so becoming a moist, warm and particulate free dressing. This means that they can only be used on exuding wounds. They are beneficial for cleaning sloughy and infected wounds, and can be used in cavity wounds. They are available in flat sheets or packing ropes and all have haemostatic properties so are of value in bleeding wounds eg donor sites and fungating wounds. All require a secondary dressing, except *Sorbsan Plus*. If the dressing adheres to the wound bed, then irrigation with 0.9% Normal

Saline should cause the dressing to gel and allow removal of the dressing without causing trauma to the underlying tissue. If there is minimal exudate from the wound, a vapour-permeable film dressing may need to be applied in conjunction with the alginate, in order to maintain a moist environment.

ANTIBACTERIALS

eg *Metrotop, Anabact, Flamazine*

Metrotop and *Anabact* are clear, colourless gels containing metronidazole. *Anabact* contains 0.75% metronidazole, and *Metrotop* contains 0.8% metronidazole. They are indictaed for chronic malodourous wounds eg fungating wounds, malodourous leg ulcers. These products should be applied daily for 7 days and then rested from treatment. *Flamazine* is a hydrophilic cream containing silver sulphadiazine 1%w/w. It is mainly used in the prevention of Gram-negative sepsis in patients with burns and should be used with caution as side effects include leucopenia and kernicterus.

CHARCOAL DRESSINGS

eg. Actisorb Silver 220, Carboflex, Carbonet, Lyofoam C, CliniSorb.

These products contain activated charcoal, which acts like a filter absorbing the odoriferous chemicals liberated from the wound, before they pass into the air. *Actisorb Silver 220* (formerly known as *Actisorb Plus*) contains silver which adsorbs organisms into the dressing and also inhibits bacterial growth in the dressing itself. This dressing should therefore be applied as a primary dressing and not as a secondary dressing. *CliniSorb* can be cut to size and should be applied as a secondary dressing.

Carbonet is a multi-layered dressing consisting of a wound layer of *Tricotex*, an absorbent layer of *Melolin* fleece and a layer of activated charcoal. *Lyofoam C* consists of a piece of *Lyofoam* polyurethane foam dressing which is heat sealed around the edges to a sheet of plain polyurethane foam. Enclosed in-between these 2 layers is a piece of non-woven fabric with charcoal granules bonded to it. Any exudate is absorbed laterally across the hydrophillic surface, so keeping the activated charcoal dry and active. *Carboflex* is a multi-layered dressing, with the contact layer containing a mixture of *Kaltostat* and *Aquacel* fibres, so improving absorption of exudate. The charcoal layer is enveloped in an ethylene methyl acrylate (EMA) film, which delays strike through of exudate. These dressings are therefore beneficial in the management of malodourous wounds.

ENZYME PREPARATIONS

eg *Varidase*

This product contains two enzymes - streptokinase and streptodornase. Streptokinase degrades fibrin and fibrinogen, while streptodornase liquefies and facilitates the removal of DNA derived from cell nuclei. It facilitates the debridement and cleansing of a wound. The product should be stored and reconstituted correctly, otherwise the enzymes will be denatured. The reconstituted solution should ideally be carefully injected directly under the eschar, however if this is not possible, the solution should be mixed with sterile KY jelly and applied topically with a vapour-permeable film as a secondary dressing. Dressings should be changed daily.

FOAMS

eg *Allevyn Non-Adhesive, Allevyn Lite, Allevyn Adhesive, Allevyn Compression, Allevyn Plus Adhesive, Allevyn Thin, Lyofoam, Lyofoam Extra, Lyofoam Extra Adhesive, 3M Foam Dressing, Allevyn Cavity, Cavi Care.*

These hydrophilic, semi-occlusive dressings provide a warm and moist environment. They are fairly absorbent and can be used for moderate to heavily exuding wounds. *Allevyn Non-Adhesive* and *Lyofoam Extra* are for moderately to heavily exuding wounds and will absorb under compression. They can be cut to size, and can be left in situ for several days, depending on the amount of exudate. These dressings are suitable for healthy granulating wounds. *Allevyn Sacral and Allevyn Heel* are of value for use in awkward areas. *Allevyn Adhesive* and *Lyofoam Extra Adhesive* have an adhesive border, and care must be taken with their removal. All of the dressings can be left in situ for several days, depending on the amount of exudate.

For granulating cavity wounds *Allevyn Cavity* or *Cavi Care* can be used. *Allevyn Cavity* conforms easily to fill the cavity, will require a secondary dressing, and can be left in place for up to 5 days. It is suitable for irregular shaped cavity wounds and wounds with undermining at the skin edges. *Cavi Care* needs to be mixed prior to application to the wound to form a stent, which will take up the shape of the wound. It is suitable for clean cavities of a regular shape. The stent needs to be removed and cleaned every 24 - 48 hours to prevent colonization of the stent, and a new stent made when the old stent no longer fits the shape of the wound.

HYDROCOLLOIDS

eg. *Granuflex, DuoDerm Extra Thin, Comfeel, comfeel Plus Transparent, Tegasorb, Tegasorb Thin, Hydrocoll, CombiDERM, ComibiDERM N, Alione, Versiva.*

These are totally occlusive dressings which provide an ideal moist environment. They are "interactive" in contact with wound exudate. Fluid is absorbed into the dressing, leading to a change in the physical state of the dressing, forming a gel. There is a bactericidal effect on some organisms, eg pseudomonas, and this can aid in preventing wound infection and excessive colonisation of the wound. Pain can often be relieved after application of the dressing, as the lack of macrophages resulting from the lack of surface oxygen, prevents the stimulation of prostaglandins which cause pain. The totally occlusive environment also encourages angiogenesis, but can cause over granulation. These dressings can be used in treating necrotic, sloughy, and granulating wounds, and can be left in situ for up to 7 days depending on the amount of exudate. A clear margin of at least 2 cms from the wound edges should be achieved, so as to prevent early leakage.

Hydrocolloids should be used with caution in diabetic patients due to an increased risk of infection, and should be changed every 2 – 3 days. They are not suitable for diabetic patients with plantar ulcers as the dressing can ruck and cause further tissue damage. In clinically infected wounds the patient should be taking systemic antibiotics and the dressing should be changed more frequently.

DuoDerm Extra Thin is a slim wafer of semi permeable film covered with a thin layer of hydrocolloid. It is useful in low exuding wounds, and as a protection against friction and shearing forces on the skin. Some hydrocolloids now contain an alginate, *eg Comfeel Plus,* which are used in heavily exuding wounds.

CombiDERM and *Alione* are semi-permeable hydrocolloid dressings containing absorptive granules, with or without an adhesive border. As exudate is absorbed it is retained within the structure of the granules, so preventing maceration**.** *Versiva* consists of a wound contact layer of thin, perforated hydrocolloid adhesive, a layer of *Aquacel*, a viscous material which wicks exudate away and a top polyurethane foam-film layer

HYDROFIBRE DRESSING

eg *Aquacel, Aquacel Ag*

This is a soft, non-woven pad or ribbon dressing composed of hydrocolloid fibres, which is 50% more absorbant than alginates. It converts to a soft coherent gel sheet as exudate is absorbed, and retains its integrity during handling. It is applied directly to the wound with an overlap of the surrounding skin by at least 1cm. A secondary dressing is required. It should be changed when saturated or by 7 days. Indicated for heavily exuding wounds, and can be used in cavity wounds. *Aquacel Ag* contains silver.

HYDROGELS

eg *Intrasite Gel, GranuGel, Nu-Gel, Sterigel, Purilon Gel, Aquafoam, Intrasite Conformable, Geliperm, Vigilon, Hydrosorb.*

These consist of insoluble polymers with hydrophilic sites, which interact with aqueous solutions absorbing and retaining significant volumes of water. Suitable for debriding and desloughing wounds, as they aid rehydration of necrotic / sloughy tissue to ease debridement, and can also be used for light to moderately exuding granulating wounds. They cool the surface of the wound, so reducing pain. A secondary dressing is required. They are contra-indicated where an anaerobic infection is suspected.

Intrasite Gel, *GranuGel*, *Sterigel, Aquafoam, Purilon Gel* and *Nu-Gel* are classed as amorphous hydrogels and can be inserted into cavity wounds, or sinuses. *Nu-Gel* and *Purilon Gel* contain alginate properties, which aid the absorption of exudate. If using an amorphous hydrogel before the application of larval therapy, then *Purilon Gel* is the preferred dressing to use as the larvae are not killed. *Intrasite Conformable* is a non-woven dressing impregnated with *Intrasite Gel.* Maceration should be avoided as the dressing containing the hydrogel is placed on the wound surface only. *Geliperm*, *Vigilon* and *Hydrosorb* are supplied as sheet hydrogels.

HYDROPOLYMERS

eg. *Tielle, Tielle Lite, Tielle Plus, Tielle Plus Borderless, Biatain Adhesive, Biatain Non-Adhesive*

These dressings consists of a mixture of polymers which are hydrophillic, and interact with aqueous fluids. They are island dressing consisting of several layers. The 3D polymer structure draws exudate from the wound into the

dressing maintaining a moist wound environment with mimimal risk of leakage and maceration.

Tielle is suitable for superficial granulating wounds with low to moderate exudate. If exudate is moderate to heavy amounts, *Tielle Plus* should be used, while if exudate is minimal *Tielle Lite* should be used as it has an extra non-adherent wound contact layer. *Tielle Plus Borderless* does not have an adhesive border, so is suitable for patients with fragile skin. Extreme care should be taken on removing these dressings, as they can traumatise delicate skin. The adhesive backing should be moistened with water in order to break the bonding of the adhesive. *Biatain Adhesive* has high absorbancy and is suitable for eudating leg ulcers and pressure sores. *Biatain Non-Adhesive* has high absorbancy and is suitable for patients with fragile skin.

IMPREGNATED DRESSINGS

eg. *Paraffin gauze dressings, Inadine, Urgotul.*

These are gauze or primary contact dressings impregnated with various substances. The paraffin gauze dressings are impregnated with various amounts of white soft paraffin, and are designed for granulating wounds, but can adhere to the wound bed and so cause trauma on removal. A secondary absorbent dressing is required. *Urgotul* is a non-occlusive hydrocolloid dressing consisting of a polyester net impregnated with hydrocolloid particles dispersed in a petroleum jelly matrix.

Inadine contains 10% povidone- iodine which is released directly into the wound. Is suitable for contaminated or infected wounds. The dressing can be left in situ for up to 5 days. No more than four dressings can be applied at the same time, and some clients may be sensitive to povidone-iodine. As the iodine is absorbed into the wound the dressing will undergo a colour change from orange-brown to cream. This dressing should not be used in patients with iodine sensitivities, pregnant or lactating women, and should be used with extreme caution in patients with thyroid disease.

POLYSACCHARIDE BEAD DRESSINGS

eg. *Iodosorb, Iodoflex.*

These products consist of hydrophilic polysaccharide beads which absorb exudate and form a gel, providing a moist environment. They will only work in exuding wounds, and are of benefit in sloughy, infected wounds. A secondary

dressing is required. The dressing should be changed once the product has become saturated. The gel can be removed with gentle irrigation of the wound. *Iodosorb* and *Iodoflex* contain cadexomer iodine, which is released into the wound as the exudate is absorbed into the dressing. As the iodine is absorbed into the wound the dressing will undergo a colour change from orange-brown to cream. These products should not be used in patients with known iodine sensitivities, pregnant or lactating women, and used with extreme caution in patients with thyroid disorders.

PRIMARY CONTACT DRESSINGS

eg. *NA, N-A Ultra, Tricotex, Melolin, Release, Tegapore, Mepitel, Mepilex, Mepilex Border, Mepilex Transfer*

These dressings provide protection to granulation tissue from harmful external influences, but allow gaseous exchange and evapouration of water vapour. They provide a moist environment, and are free from particulate contamination. They will require a secondary dressing, except *Melolin* and *Release* which have some absorbency. Can be left in place for several days. *Melolin* is not used as much nowadays as a primary dressing, due to its tendancy to adhere to the wound bed, however it may be used as a secondary dressing or over an incisional wound.

NA and *Tricotex* are sterile knitted viscose primary dressings, while *N-A Ultra* has been coated with silicone, making the dressing non-adherent. Exudate is able to pass through to an absorbent secondary dressing, due to the knitted open structure of the fibres. *Tegapore* and *Mepitel* are non-adherent dressings which can be left in place for seven to fourteen days, with the secondary dressing being changed as required, so reducing pain at dressing change. *Mepilex* consists of a soft silicone wound contact layer with a polyurethane foam film backing sheet, making it a highly absorbent, conformable non-adherent dressing. *Mepilex border* has an adherent border. *Mepilex Transfer* will transfer exudate away from the wound.

PROMOGRAN

This is a collagen dressing which actively binds and inactivates proteases that may impede healing, and binds and protects growth factors which are released into the wound bed as the dressing is absorbed. Is used in chronic wounds.

SILVER IMPREGNATED DRESSINGS

Eg. *Actisorb Silver 220, Avance, Avance A, Acticoat, Actocoat 7, Aquacel Ag, Contreet-Ag, Contreet-H, Flamazine.*

These dressings contain varying amounts of silver ions – a potent biocide – which is active against many types of bacteria. They are of value in controling the bacterial burden and preventing infection in chronic wounds.

VAPOUR-PERMEABLE FILMS

eg. *Opsite Flexigrid, Tegaderm, Bioclusive, Mefilm, C-View, Arglaes*

These are thin, sterile, vapour-permeable, hypoallergenic, adhesive-coated film dressings. They are permeable to both water vapour and oxygen, are impermeable to micro-organisms, and provide a moist environment by reducing water vapour loss from the exposed tissue. In these conditions scab formation is prevented and epidermal regeneration takes place at an enhanced rate. Only suitable for shallow, low exuding wounds, but can be used in conjunction with other products in order to maintain a moist environment. Can be used as a prophylactic measure eg prevention of pressure sores due to friction.

Arglaes is a controlled release film dressing containing silver ions which are slowly released, so exerting a constant antibacterial effect. *Opsite Flexigrid* contains an extra layer for tracing and documenting the shape of the wound. These films are not suitable for use over cannula sites, as they provide too moist an environment. A high permeable film should be used eg *IV 3000* or *Tegaderm HP.*

SKIN PROTECTION WIPES

eg *Skin Prep, Comfeel Protective Film, Cavilon No Sting Barrier Film*

These are wipes which when applied to the skin apply a fine copolymer layer, so protecting the skin under ostomy appliances, dressings and adhesive bandages. They can also be used to protect the skin from drainage from a fistula, wound exudate and skin damage caused by removal of adhesive products. *Skin Prep* and *Comfeel Protect Film* both contain isopropyl alcohol and so may sting if applied to any damaged or excoriated skin. *Cavilon No Sting Barrier Film* is a polymeric solution which dries rapidly, does not sting on application and lasts for up to 72 hours.

Rosie Pudner October 2003