

Dressing Selection & Application in Critical Care

Aim: To provide practical guidance on effective wound management in Critical Care.

Scope: All critical care patients with wounds. This Critical Care Standard Operating Procedure should be used in conjunction with advice from the Tissue Viability Team as required.

Ratified by: Critical Care Governance Group

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Key Points

Dressing selection is based on good wound assessment (T.I.M.E)

- Record wound size and depth including undermining and tracking on admission and reassessment
- T** Tissue: presence of slough, necrosis, granulation, epithelial tissue
- I** Infection
- M** Moisture: exudate colour, viscosity and volume
- E** Edges and surrounding skin
- Consider rationale for treatment- short and long term goals
- Re-assess weekly or more frequently if any deterioration

Apply a holistic approach to wound healing

The dressing only provides an optimum wound healing environment. A holistic approach must be taken as systemic factors may be more important than local wound care. Nutrition, systemic infection, tissue perfusion, drugs, oxygenation, oedema and electrolyte balance all affect the wound's ability to heal.

Remember the aims of a dressing:

- To provide a moist, not wet environment: migrating epithelial cells will not negotiate dry scabs; moist nerve endings reduce pain.
- To provide a warm environment: if wound bed temperature drops below 37°C the healing process will be delayed for up to 4 hours.
- To protect the wound: avoiding contamination of wound by particles and padding against injury
- To prevent strike through of exudate: avoiding a passage for bacteria to enter the wound
- To be removable without causing trauma

Alginate (*Sorbosan*)

What it is:

- Calcium Alginate
- Absorbs 15-20 times its own weight in exudate
- Stimulates haemostasis

When to use:

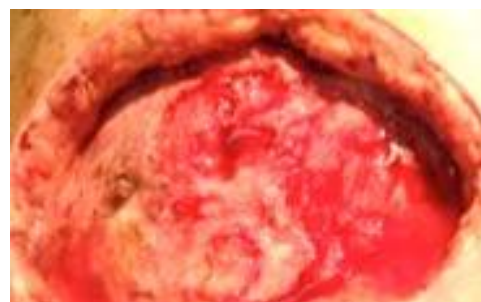
- On moderately exuding wounds
- On bleeding wounds
- When packing sinuses

When to avoid:

- On dry wounds
- On necrotic wounds
- In a very narrow sinus

How to use:

- Apply directly to wound bed



Hydrofibre (*Aquacel*)

What it is:

- Absorbs 30 times its own weight
- Remains intact longer than Alginates
- Available as flat sheets or as rope

When to use:

- Exuding wounds
- Leg ulcers
- Pressure ulcers
- Sinus wounds

When to avoid:

- Dry wounds
- In a very narrow sinus

How to use:

- Pack loosely
- Initially change daily, then every 7 days or when saturated
- Remove all residue on changing



Hydrocolloids (*Granuflex/ Duoderm*)

What they are:

- Hydrophobic, waterproof outer layer
- Hydrophilic, absorbent inner layer
- Semi-permeable to gases

When to use:

- Wounds that need debridement
- Sloughy wounds

When to avoid:

- Diabetic feet
- Fragile, bruised, steroidal skin
- Generally avoided on sacral areas

How to use:

- Cover the wound plus 2cm all round
- Easier to apply and mould when warm
- Can be left in place for up to 7 days



Hydrogels (*Intrasite Gel / Intrasite Conformable*)

What they are:

- Transparent gel supplied as a pod
- Impregnated gauze

When to use:

- Softening eschar
- Debridement
- Desloughing
- Shallow or deep wounds
- Particularly useful for painful wounds

When to avoid:

- Granulating wounds
- Epithelising wounds

How to use:

- Area around wound may need protective barrier to prevent maceration
- Change every 3 days if wound necrotic
- If no necrosis, change when clinically indicated



Silicone-Coated Non-Adhesive Dressing (*Mepitel, Adaptic Touch*)

What it is:

- Wound contact layer
- Porous, transparent & flexible
- Non-absorbent
- Non-traumatic on removal
- Open mesh allows exudate to pass through

When to use:

- Painful wounds
- Skin tears, abrasions & lacerations
- Ulcers
- Burns & skin grafts
- Under Vac sponges

When to avoid:

- Dry wounds
- Fistulas & sinuses

How to use:

- Avoid overlapping & blocking holes in dressing
- Cover wound plus 1cm surrounding skin
- Always use an absorbent secondary dressing



Polyurethane Foam (*Allevyn*)

What it is:

- Non-adherent foam
- Primary or secondary dressing
- Incorporates a wicking layer
- Allows evaporation from back of dressing
- Outer layer is waterproof

When to use:

- Heavily exuding wounds
- Shallow granulation wounds
- As protection for chronic wounds

When to avoid:

- Sealed necrotic wounds
- Ineffective on thick slough

How to use:

- Apply with pink side away from wound bed
- Change as clinically indicated or on day 5-7



Negative Pressure Wound Therapy (*Vac / Activac*)

What it is:

- Allows healing by secondary intention
- Maintains a clean wound between surgery
- Creates a hypoxic environment where aerobic bacteria cannot survive
- Rapidly reduces wound colonisation
- Pulls blood into wound, increasing growth factors, oxygen and macrophages

When to use:

- Reasonably clean open wounds healing by secondary intention
- Highly exudative wounds
- Over suture lines to prevent seromas
- As guided by Tissue Viability Team

When to avoid:

- Over exposed organs
- On wounds with narrow tracts
- On wounds with thick slough or necrosis

How to use:

- Protect area around wound with Duoderm
- Protect wound bed with Mepital
- Cut sponge to shape slightly larger than wound
- Secure with strips of supplied adhesive drape
- Position suction port over area likely to pool fluid
- Position suction port and tube carefully to prevent pressure damage

