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International Multidisciplinary Consensus Recommendations: ciNPT with Reticulated Open Cell Foam (ROCF)

Linear and Area Coverage with Closed Incision Negative Pressure Therapy Management: International Multidisciplinary Consensus Recommendations

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Abstract Summary

Closed incision negative pressure therapy (ciNPT) with foam dressings has evolved over time to include linear and area shapes to better conform to different incision types and surface geometries in support of incision healing. An international, multidisciplinary panel of experts convened to review recent publications on ciNPT with reticulated open cell foam (ROCF) dressings to provide guidance on dressing selection and explore the benefits, drawbacks and technical challenges. This manuscript establishes consensus statements regarding risk factors supporting the use of ciNPT, conditions supporting preference of linear or area ciNPT dressings and tips for practical application of ciNPT with ROCF dressings.

Key Messages

- ciNPT can be applied using various sizes and shapes of foam dressing to support healing of a wide array of incision types and anatomical locations.
- To provide guidance on dressing selection and application, an international, multidisciplinary panel of experts reviewed recent studies on ciNPT with foam dressings, shared their experiences, and discussed the benefits, drawbacks, and technical challenges.
- The panel produced consensus statements regarding risk factors supporting the use of ciNPT, conditions supporting preference of linear or area ciNPT dressings and tips for practical application of ciNPT with foam dressings.

Consensus Recommendations

An international multidisciplinary panel of experts reached consensus on the following for ciNPT with reticulated open cell foam (ROCF).

Risk factors supporting the use of ciNPT dressings with ROCF

- ciNPT is recommended:
  - ◇ when patient risk factors ≥ 2
  - ◇ when incision risk factors ≥ 2
  - ◇ for high-tension incision closures
  - ◇ for incisions with a high risk of seroma formation
  - ◇ for incisions after high-energy trauma
  - ◇ for incisions with a high risk of compromised perfusion
  - ◇ for repeated incisions or revision surgeries
  - ◇ for cases in which delayed incision healing would postpone adjuvant therapy
  - ◇ when there are signs of hypoperfusion near the incision
- ciNPT:
  - ◇ may be offered for elective use for incisions in which scarring is a concern
  - ◇ when applied, should be used alongside validated incision risk scoring systems
  - ◇ should be included in surgical site infection (SSI) prevention bundles for high-risk patients

Area ciNPT dressings are recommended

- ◇ when there are large, undermined areas around the incision
- ◇ when there is a high risk of edema
- ◇ when there is a high risk of lymphedema
- ◇ after closure with flaps
- ◇ over nonlinear, intersecting or branching incisions
- ◇ over new incisions that cross over previously healed incisions
- ◇ over surgical sites with a thin soft-tissue envelope
- ◇ where there is a need to reduce seroma space

Tips and tricks for practical application of ciNPT dressings with ROCF

Caution should be taken when using non-occlusive dressings, which could cause loss of vacuum with ciNPT.

Hydrocolloid dressings are recommended to aid in creating a vacuum seal in difficult locations.

Delicate areas at risk of blistering should be protected with drape or occlusive dressings.

Small blisters that may form at the edge of foam dressing do not typically require early removal of ciNPT dressings.

The appearance of large blisters at the edge of the ciNPT drape should be quickly addressed with removal of ciNPT dressings and/or protection with occlusive dressings.

Read the full consensus

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