

Wound breakdown was 4.2% in the breast surgery group treated with PICO°, compared to 16.7% in the standard care group

This study supports the use of the PICO° Negative Pressure Wound Therapy system for closed incision management after oncoplastic breast surgery to reduce the likelihood of wound healing problems



Evidence

- Level 2 evidence: prospective case control cohort study
- Non randomised



24 patients with breast cancer needing complex bilateral oncological surgery

- Oncological therapeutic mammoplasty (TM) in cancerous breast (n=21) treated with PICO°
- Skin sparing mastectomy with immediate reconstruction with inferior dermal flap and implant (n=3) treated with PICO°
- All had simultaneous symmetrising breast reduction of the contralateral breast treated with standard care (n=24)
- Assessment at day 6 & 12 post-operatively



PICO° reduced wound breakdown (dehiscence) in complex breast surgery

- PICO° 4.2%; standard care 16.7%
- 75% reduction in wound dehiscence with PICO°



PICO° reduced the mean time to heal wounds after complex breast surgery

- PICO° 10.7 days; standard care 16.1 days
- Visual improvement in wound appearance in PICO° treated surgical incision

COMMENTS:

There is a growth in the number and complexity of surgical procedures available to treat breast cancer safely whilst preserving cosmetic appearance as much as possible.

- TM uses the typical resection patterns for aesthetic breast reshaping / reduction to ensure full tumour removal. It is complex surgery with increased wound healing problems
- Mastectomy with immediate breast reconstruction with inferior dermal flap and implant is used when all breast tissue requires removal but has high wound complication rates due to the length of the operation and the need for skin flaps
- Dehiscence typically occurs at the T-junction of the Wise pattern excision (also known as inverted T) as it is under great tension
- Delayed wound healing may delay adjuvant chemotherapy in breast cancer patients

This study (although not an RCT) was a good clinical study because each patient acted as their own control. The PICO° NPWT was always placed on the breast where the cancer was removed while standard care dressings were used on the contralateral symmetrising breast. They were consecutive patients over 20 months in which the lead surgeon (John Murphy) performed the operation.

There was no statistical analysis performed but there was a clear reduction in wound dehiscence in the breast treated with PICO° (with the greater risk of wound healing complications) compared to the breast treated with standard care.

WoundEvidence

Single paper review

Holt R, Murphy J (2015)

Authors:	Holt R, Murphy J.
Title:	PICO [®] incision closure in oncoplastic breast surgery: a case series
Aim of the study:	Results of a case control cohort study of closed incisions in oncoplastic breast procedures treated with PICO [®] single use NPWT compared to standard care
Study Type:	Prospective case control cohort study
Wound Type:	Closed surgical incision
Speciality/Indication:	Breast surgery (plastic surgery)
Products:	PICO [®]
Number of patients:	24 patients: (PICO [®] n=24; standard care n=24)
Reference:	<i>Brit J Hosp Med</i> 2015; 76(4): 2-8.
Details:	Peer reviewed journal PubMed Listed Impact factor 0.376

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