

UNO+

CASE STUDY

UNO+ AND HYBRID DRESSING FOR LATERAL DOWNWARD FORCE UPON A BREAST LUMPECTOMY SCAR LINE TO IMPROVE APPEARANCE.

Lumpectomy, sometimes known as tylectomy, partial mastectomy, breast segmental resection or breast wide local excision, is the discrete removal of a lump of breast tissue for breast preservation with the advantage of improved physical and emotional scarring over more disfiguring surgery. The amount of tissue is greatly reduced and used for diagnosis of the cells present. Usually recommended for early detection and smaller lumps.

Patients should have a pre-assessment prior to surgery as comorbidities can affect outcomes following surgery, (Examples obesity, smoking, autoimmune disease diabetes).

Surgical site infection (SSI) is one of the most common nosocomial infections. It is a major cause of morbidity and mortality, leading to increased hospital stay, financial burden and mental anguish.

Mental anguish in the case of abnormal cells within a breast lump present is especially high due to the unknown the patient faces as breast cancer is constantly highlighted in the media.

Monitoring the patients following surgery is essential, signs such as leakage spreading, redness and fever should be noted by placing the **NPWT** upon the scar line directly or as near to theatre time as possible. Irfan et al noted we can protect the scar line from environmental contamination and reduce the risks of seroma and fluid collections.

A Lumpectomy is the removal of a piece of tissue. The patient is told that there may be disfiguring of the breast below the scar line due to cavity / dimpling, sensitivity and pain. Fluid may collect in this area leading to wound seepage.

The clinician's approach of applying the dressing with a lateral downward force on the scar line is effective at minimizing disfigurement and reducing the likelihood of rucked scarring. This technique seems to help in preventing fluid accumulation beneath the scar.

The successful outcome, with no dimpling or sunken skin observed, supports the efficacy of this method.

To prevent occurrence of SSI in patients at risk within some communities, **NPWT** scar line management has been successfully introduced with single use units, however when no canister is present if the dressing gets very wet, moisture vapour transfer (MVP) is not able to work quickly enough. Orlov et.al (2022) reports that suction or therapy pressure is greatly reduced below a wet dressing and maceration may occur with loss of lateral force. Also stated in the report, a canister system is referred for wet leaking wounds providing continuous downward force to remove swelling, oedema and, preserve the scar line. **Uno+** is a reusable pump allowing the clinician a choice of settings with continuous or variable therapy. Canister sizes available are 200ml or 300ml which tuck neatly into the carry bag. The **UNO+** multi-patient pump ensures continuous availability on the shelf without the need for frequent replacements. This approach leads to significant cost savings by reducing the expense of constantly replacing disposable pumps. It also minimizes environmental impact, fewer disposables offers less waste. With a single battery lasting up to a year before needing service, the system is both cost effective and eco-friendly.

Patient History

Mature woman in her sixties faces lumpectomy with clear margins to be taken for diagnosis of abnormal cells.

Patient presented to doctor following weight loss finding a lump upper inner quadrant of the right breast. In the U.K the referral process states patients are all seen in the specialist unit within a two-week period. All investigations are arranged upon this day which included a mammogram and guided ultra sound biopsies were taken suggesting the need for further surgery to confirm diagnosis.

Outcomes

No pain was felt from instigation of **NPWT**.
Scar line visibly reduced after one week, no swelling or redness when pump removed.

Following removal of **NPWT** the scar line was massaged with **Aktigel** a plant based bio cellulose gel which is known to accelerate healing & improve scar line healing. Pictorial history shown with last picture less than one month later.

By applying knowledge from practise we can greatly influence outcomes for our patients.

Reference:

National Institutes of Health (NIH) (.gov)<https://www.ncbi.nlm.nih.gov/articles/PMC6004735> by I Ashraf · Ann Med Surg (Lond), 2018 Jul; 31: 14–16. Published online 2018 Apr 10. doi: 10.1016/j.amsu.2018.04.006 PMCID: PMC6004735 PMID: 29922462.
Surgical site infection surveillance following total knee arthroplasty: Tertiary care hospital experience. Irfan Ashraf,a Yasir Mohib,a Obada Hasan,a, Amina Malik,b Khabir Ahmad,a and Shahryar Noordin Effective negative pressure wound therapy for open wounds: The importance of consistent pressure delivery. Aleksei Orlov, Amit Gefen First published: 11 July 2022. <https://doi.org/10.1111/iwj.13879>Citations: 3
Breast Cancer Now. The research and support charity <https://breastcancernow.org/blogs/Aktigel> trademark Genadyne bio cellulose gel.

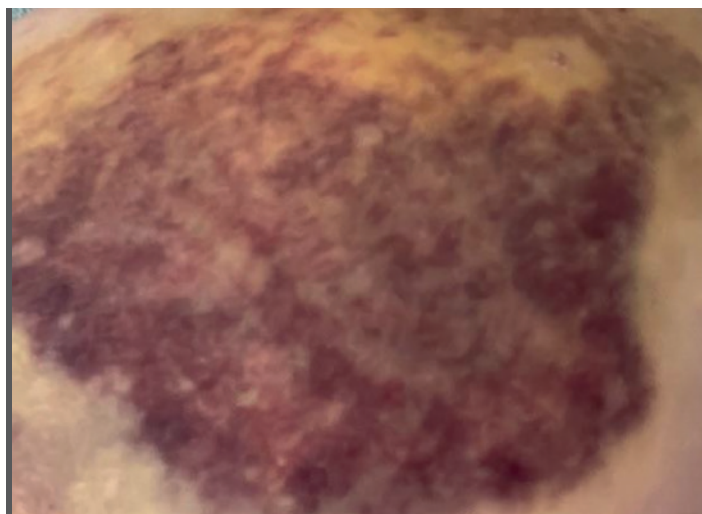


Figure 1

Bruising seen following ultrasound biopsy (the following day).



Figure 2

5 hours after theatre bruising beginning to form. Home application of **UNO+** pump.



Figure 3

Pump insitu for 7 days. No pain noted from instigation of **NPWT** pump. Lateral downward force gives security



Figure 4

Bruising does not appear to touch scar line, scar line flat when finger run over it. Length has visibly decreased.



Figure 5

25 days later the scar line had been massaged with aktigel daily. Appearance no sunken areas, healthy