

NPWT

CASE STUDY

CASE STUDY HIGHLIGHTING THE RISKS OF BILATERAL MAMMOPLASTY.

Problems are not limited just to bleeding, infection, poor healing of incisions, and anesthesia risks.

Breast reduction risks can include:

Allergies to tape, suture materials and glues, blood products, topical preparations or injectable agents.

Bleeding leads to

- Hematoma formation.
- Blood clots.
- Breast asymmetry.
- Breast contour and shape irregularities.
- Changes in nipple or breast sensation, (which may be temporary)

History:

Breast reductions have been performed for hundreds of years; the original procedures were breast amputations. In 1922, (Thorek) reported on free nipple-areola grafts with reduction. This safe, rapid procedure provided an acceptable cosmetic result and has a low complication rate in older and high-risk patients, as well as in patients with very pendulous breasts.

Multiple procedures are offered today with a high success rate showing satisfaction of around 80-95 %. The incidence of complications is estimated at 6.5% to 22% for reduction mammoplasty; the effect on the patient can be dramatic both physically and emotionally. In some cases, the patient may lose the breast or require further surgery.

Case history:

Causation female admitted **19.6.23** for an elective Bilateral Mammoplasty

Seen as an emergency **22.06.23** with severe pain and discoloration of right nipple. The primary dressing was

removed and replaced. Nipple pinking up and pain reduced.

Seen 1-week post-op **26.6.23**. Primary dressing removed. Extensive bruising to the right breast and blistering under the right nipple.

Seen 2 days' later complaining of pain in the right breast. The right breast was swollen and tender with a clinical picture of hematoma. An urgent ultrasound was done, which confirmed a hematoma, and aspiration under ultrasound was attempted. 17 ml of old blood was obtained. She underwent a manual evacuation of the hematoma under local anesthetic

Seen July 5th following an urgent admission to York Hospital with increasing pain. Opiate naivety and complications following breast surgery. Not septic. On route to clinic involved in an RTA no obvious injuries. Upon review, the left breast is healing well. Swelling and bruising reduced on the right breast. A small area at the T junction of the wound is draining hemo serous fluid (Where the hematoma was drained). Redressed alginate and Opsite post-op.

6.7.23 Asked to see the following visit by GP, who advised her to see her consultant immediately! The wound was draining freely. No clinical signs of infection. Decision made to use **NPWT** to aid drainage of hematoma, Uno+ Negative Pressure Wound Therapy Pump with 10x20 cm hybrid dressing applied set at -125mmHg on continuous pressure. Patient education was given regarding fault finding and troubleshooting.

7.7.23 System alarming and leaking. Observed dressing leaking from 2 areas on the suture line as well as the T junction, old hematoma, and hemo serous fluid. A larger hybrid dressing was applied -125mmHg continuous drainage. The unit was working well.

8.7.23 Seen at the request of the patient as tubing had disconnected from the canister? (Tubing caught and pulled off canister). Redressed as above 150mls drainage.

9.7.23 19.20 hrs phone call from patient dressing feeling hot and funny down her cleavage to the point it feels sore. Advised to discontinue **NPWT** and see in the morning

10.07.23 Seen as arranged. The dressing was removed and is now leaking from 3 areas on the suture line as well as the T junction. **NPWT** was reapplied using a large hybrid dressing -125mmHg on continuous. Sealed immediately See 48 hrs. Urgent phone call at 18.00 hrs as Uno+ was making a lot of noise. Seen at the patient's home, **NPWT** changed. Hybrid dressing -125mmHg, continuous. Note made that the patient's mother smokes in the house, and the patient has 2 lapdogs that sleep on the bed.

12.07.23 Seen as arranged. The system continued functioning. The area at the T junction showing 100% granulation tissue with evidence of epithelialization from the edges. Shallower and exudate levels were lowered. Bruising almost resolved. Redressed with Hybrid dressing -125mmHg and continuous suction.

14.07.23 Seen as arranged, dressing intact, and pump working, 150mls drainage. Exudate levels reduced. 100% granulation tissue, 3 exuding areas on suture line resolving. No clinical signs of infection. Redressed with Hybrid dressing -125mmHg continuous pressure.

17.07.23 Dressing intact and pump working well. 50mls drainage. Dressing changed 15x30 hybrid dressing -125mmHg on continuous pressure. The original area's exudate was less, but a new area on the lateral aspect of the horizontal line exuding ++ wound swab was sent. No clinical signs of infection
18.07.23 Seen at the request of the patient as the machine was showing a leak at 20.00hrs the night before. Redressed with 15x20 hybrid dressing -125mmHg on continuous pressure.

20.07.23 Seen as arranged. X2 areas remaining (1 just below nipple and 1 at T junction). Surface area reduced exudate levels down No clinical signs of infection. Redressed with 15 x 20 hybrid dressing -125mmHg on continuous pressure.

24.7.23 Phone call on 23.7.23 patient complaining of soreness under the dressing. Informed clinician that she was taking the dressing off. Observed there was an area of irritation medial aspect of the scar line. Minimal drainage approx. 10mls in 72 hours. All areas granulating and epithelializing from the wound edges. There were no clinical signs of infection. The Pump was removed.

Idoflex and mepore dressings were applied on alternate days to facilitate the final epithelisation of the area.

Scenario:

Should we be applying Lateral tension **NPWT** at time of surgery to reduce incidents of these complications. Previous work into scar line management has shown that lateral tension provided by single use **NPWT** pumps can reduce swelling and haematoma formation causing SSI's. Use is supported in Nice Guidelines Published 2023

Later work by Orlov et.al has shown that dressing with no canister lose some of their lateral downward force sometimes seen as up to 80%.

Many countries are pushing patients home following surgery very quickly to prevent Hospital acquired infection and rising costs of hospital bed occupancy Cumley 2021 recently highlighted the rise in home care and the need for improved care in the community.

Uno plus is a reusable small pump which can give service to multiple patients over a one -year period and then be serviced for another year's use.

Being small with two sizes of canister and a carry bag it gives the patient mobility freedom and safely. Hybrid dressings were developed to ease the burden on health care services while maintaining the safety and integrity of patient care. Cleaning and up keep of the pump should always follow the hospital policies with contractors in-put as needed.

Reference List

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Orlov.A. Gefen.A. The potential of a canister-based single-use negative-pressure wound therapy system delivering a greater and continuous absolute pressure level to facilitate better surgical wound care. 2021 Page1-24. International Wound Journal published by Medicalhelp-lines.com Inc (3M) and John Wiley & Sons Ltd.



Figure 1

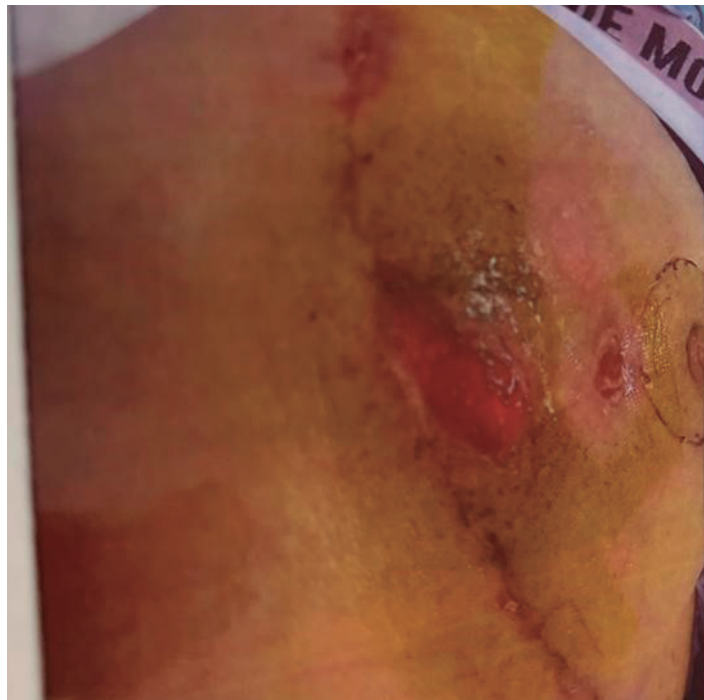


Figure 2



Figure 3

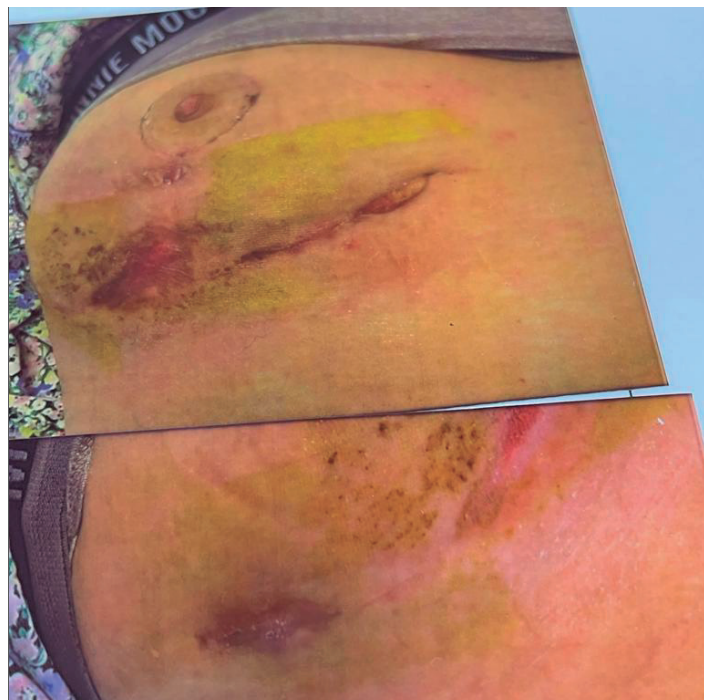


Figure 4