

NPWT with Instillation
Complex Sternal Wound with
Bilateral Pectoral and
Rectus Abdominal Flap
Reconstruction

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Objectives

- ❖ NPWT with instillation mechanism of action
- ❖ Foam selection guidelines and techniques for wounds with complex topography

Case History

67-year-old female:

- Obesity, diabetes, hypertension, dyslipidemia, CHF with chronic reduced ejection fraction, CKD, hypothyroidism, liver cirrhosis, hepatitis C, & coronary artery disease.

Surgical Timeline

- **12/27/18:** Emergent CABG x 4
- **1/7/19:** Sternal I&D, Sternal Plating, Bilateral Pectoral Flap Reconstruction
- **4 subsequent I&Ds with NPWT exchange**
- **2/14/19:** Sternal I&D 20 x 5 cm, pectoralis major advancement flaps, R rectus abdominis flap for chest wall coverage with NPWT
- **3/3/19:** I&D 53 x 24 cm.
- **5/16/19:** STSG, I&D, & NPWT applied

NPWT with Instillation

Starting point: 2/7/19

Post muscle flap: 2/18/19



NPWT with Instillation

2/27/19



NPWT with Instillation

3/4/19



NPWT with Instillation

3/25/19



HBOT with Hypochlorous acid Dressing

4/8/19



Treatment Progression

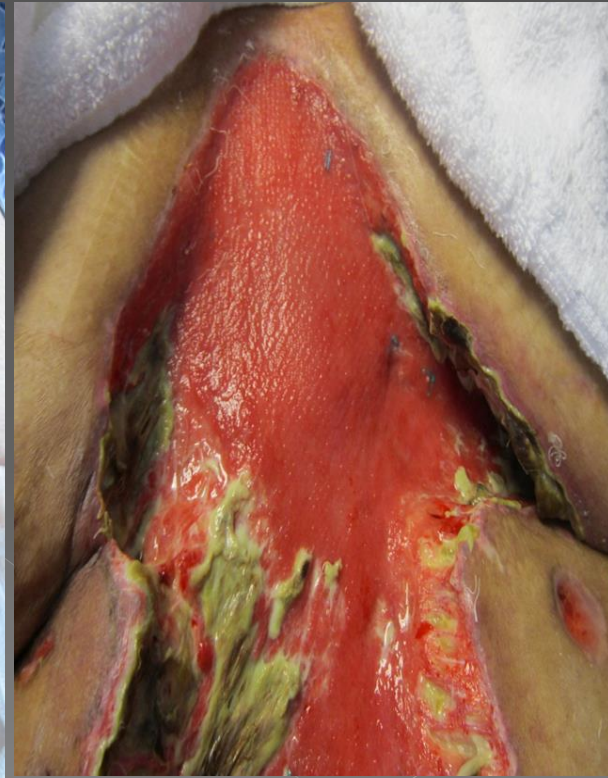
Post flap: 2/18/19



5 weeks



7 weeks



Treatment Progression

6/4/19



Treatment Progression

7/9/19



NPWT & Wound Care Summary

- 5 weeks: NPWT with instillation

 - > 2 weeks Gentamycin solution

 - > 3 weeks Clorpectin solution

Cycle: q 30min, 4-6 min soak, 300 ml (200ml)

- 1 week: Traditional NPWT (Dynamic Pressure Control)

- 2 weeks: Hypochlorous acid dressings q12h with HBOT

- Silver Hydrofiber dressing daily until discharged from hospital

- Methylene blue and gentian violet with HBOT until healed