



# **NEGATIVE PRESSURE WOUND THERAPY TRAINING**

**CLINICAL EDUCATION:** Classifications of Wounds

# Agenda

- Why
- Classification of wounds
- Case Studies
- Recap
- Questions
- Contraindications for NPWT



# Why?

- How does understanding the wound cause effect you?
- How does the wound classification effect ordering process?



# Classification of Wounds

- Diabetic
- Surgical
- Abscess
- Soft Tissue Injury
- Pressure
- Venous
- Traumatic
- Arterial



# Diabetic

- Occurs with diabetic patients
- Patients have neuropathy
- Only occurs on the plantar surface of the foot
- Lack of blood flow and decrease sensation is generally the cause of these wounds



## EXAMPLE:

Diabetic patient gets a rock in their shoe and does not feel the rock and a wound develops

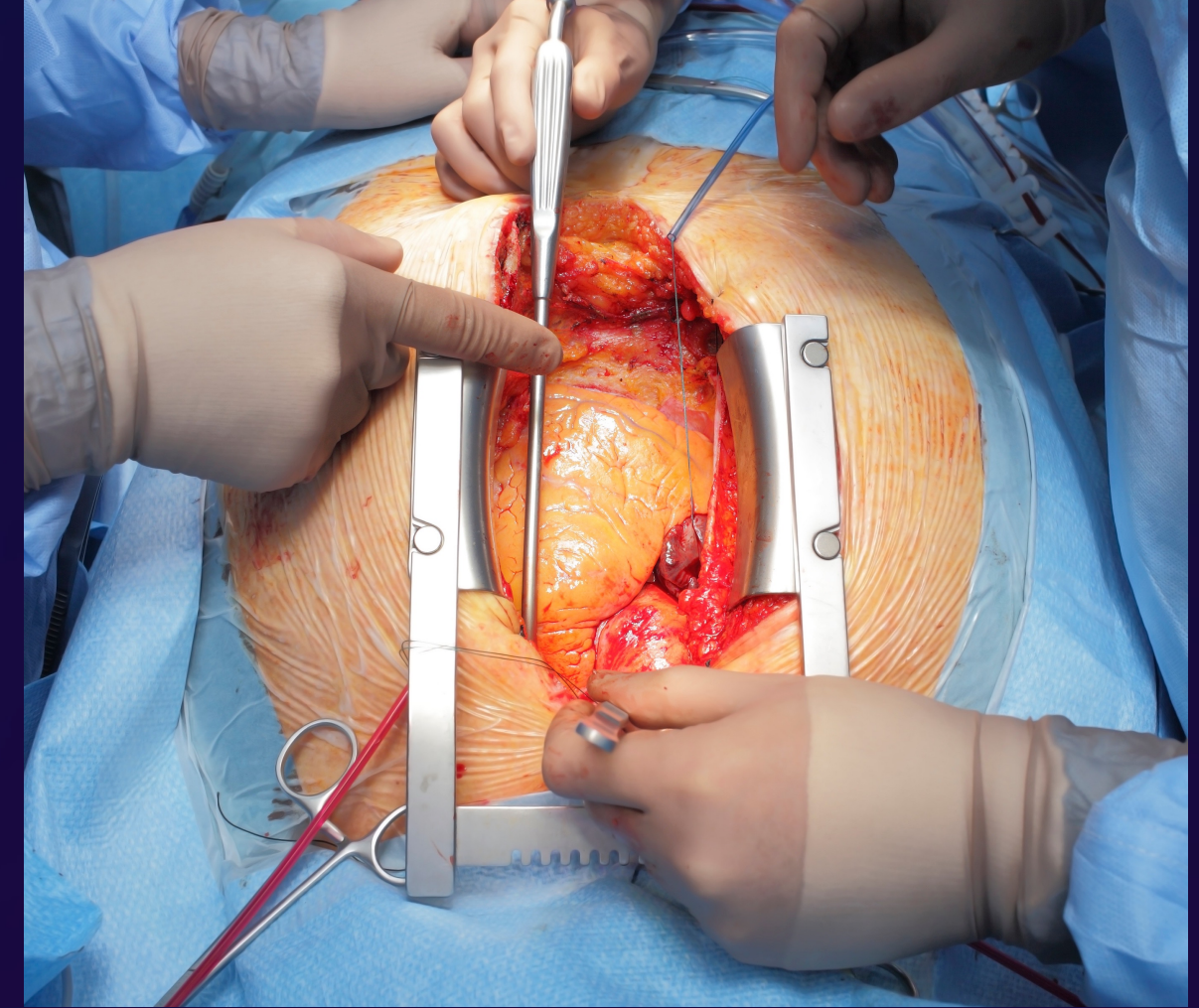
## TREATMENT:

Offload pressure and place NPWT



# Surgical

- The wound was not there before the surgery
- These wounds are intentional left open or dehisce
- These occur where ever the surgical site is
- Insurance does not consider an incision line a wound, they consider this wound closed



## EXAMPLE:

Patient goes in for a C-Section and the doctors leave the wound open and places NPWT

*What is needed to get this approved?\**

## TREATMENT:

Negative Pressure Wound Therapy

*\*Check with insurance company for their specific guidelines and criteria*



# Abscess / Cyst

**Definition:** A swollen area within body tissue, containing an accumulation of pus

- Can be any where on the body
- Common areas: groin, chest, and armpits
- These generally will need to be drained
- It is called an I & D
- An open wound is left after an I & D



**KEY FACT:**

If they drain the wound via an I & D, this does not make this wound a surgical wound. The wound type is always what caused the wound

**TREATMENT:**

Negative Pressure Wound Therapy



# Soft Tissue Injury

- Soft tissue injuries are generally caused by a traumatic event
- You see this in patients that fall
- Usually presents looking like a bruise
- The blood builds up from the inside, causes pressure, and cuts off blood flow and the tissue dies
- These wounds are generally I & D and/or surgically debrided



## KEY FACT:

If they drain the wound via an I & D, this does not make this wound a surgical wound. The wound type is always what caused the wound

## TREATMENT:

Debride and place NPWT





# Pressure Wound

- Caused by pressure (cause & effect)
- Wounds generally found on heels, buttocks, posterior head and scapula's
- Can be caused by a orthopedic brace
- These wounds are staged from 1-4
- These are chronic wounds



## KEY FACT:

We make several different products to aid in the healing of these types of wounds

## TREATMENT:

Reduce pressure & treat with NPWT



# Venous Wound

- Caused by venous insufficiency
- This cause blood to pool
- The plasma leaks out of the capillaries
- This causes swelling in the lower legs
- Edema occurs and the dermal layer peels off
- This exposes a full thickness wound



## TREATMENT:

Compression and NPWT



# Traumatic Wound

- Caused by a trauma
- These are open wounds
- Common causes: Gunshot, stabbing, MVC, falls, and other traumatic events
- These are treated in various of modalities



# Arterial Wound

- Caused by decreased or no blood flow in the artery
- Generally, these wounds are in the toes, fingers and the shin area
- These wounds are dry in appearance
- These wounds are generally dark in appearance



**KEY FACT:**

Never NPWT

**TREATMENT:**

Reestablish blood flow



# Determining Etiology

- It is difficult at times figuring this out
- Always look for what initially caused the wound
- Do not overcomplicate this!!!



# Case Study 1

## Scenario:

- Pt is 52 year old male with history of smoking, CHF, DM (insulin dependent), CHF, CAD, obesity. The patient presents with wound to the plantar surface of his right foot that measures 5 cm by 3 cm by 1 cm and the wound is bed is 20% pale in appearance, 70% slough and 10% eschar

## POC:

- Apply calcium alginate to the wound once a day. Perform surgical debridement of the wound in two days. After debridement place NPWT on wound at 125 mm/hg.



# Case Study 1

- What is the wound etiology?
- Does this wound require a surgical note?
- After debridement, can NPWT be placed without any special paperwork?
- If the clinician ask, if you have any recommendation on applying this dressing, what would it be?



# Case Study 2

## Scenario:

- 22 year old female that a C-Section was performed. She has medical history of obesity and non-insulin dependent diabetes.

## OP Report:

- Allowing wound to heal via secondary intention with the aid of NPWT at 125 mm/hg. NPWT placed during the end of the procedure.

## POC:

- Change NPWT three times a week





# Case Study 2

- What is the wound etiology?
- Does this wound require a surgical note?
- Will this wound require further documentation for insurance approval?
- If the clinician ask, if you have any recommendation on applying this dressing, what would it be??



# Case Study 3

## Scenario:

- 83 year old female with history of falls, dementia, CHF, CAD presented with a injury to her forearm secondary to a fall. The area is non-blanchable and is dark in appearance.

## OP Report:

- Incised and drained left forearm, appear to be a large hematoma formation. Post op measurements of 4 cm by 5 cm by 3 cm. Moist dressing placed.

## POC:

- Post OP day 2, discontinue moist dressing and place Nisus NPWT system at 85 mm/hg, change 3 times a week



# Case Study 3

- What is the wound etiology?
- Does this wound require a surgical note?
- Will this wound require further documentation for insurance approval?
- If the clinician ask, if you have any recommendation on applying this dressing, what would it be??



# Recap

- How do you determine wound etiology?
- When is a post operative report required?
- When is LMN required?
- What does the LMN need to state?
- Can a surgeon place NPWT immediately post op?



# Contraindications For NPWT

- Greater than 20% eschar
- Cancer in the wound
- If bone is present, osteo has to be ruled out prior. If osteo is present, then antibiotics must be ordered to treat osteo, prior to NPWT
- Being used to manage a fistula drainage, it is fine to have a fistula in the vicinity of wound, but a wound must be present to qualify for NPWT
- Being used over organs, blood vessels, arteries and/or nerves
- Partial thickness injury: depth less than or equal to 0.1 cm depth





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