V.A.C. VeraFlo™ Therapy and its value in comparison to NPWT without instillation

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Important Information

- Prior to use of the V.A.C. Ultra™ Negative Pressure Therapy System and V.A.C. VeraFlo™ Therapy, it is important for the treating physician to read and understand all Instructions for Use, including Safety Information and Dressing Application Instructions.

- Complete safety information and instructions for use can also be accessed on www.kci1.com in the e-labeling section.

- Key Safety Information is provided at the end of this presentation.

- KCI recommends that clinicians participate in device in-service and training prior to use.

- The following slides include case studies and clinical reports based on the speaker’s individual clinical experience and research. As with any case study, the results and outcomes should not be interpreted as a guarantee or warranty of similar results. Individual results may vary depending on the patient’s circumstances and condition.

- This material is intended for healthcare professionals. Rx only.

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Objectives

- Review Instillation Therapy
- Discuss literature on NPWT with instillation
- Share clinical experiences with V.A.C. Ultra™ Negative Pressure Wound Therapy System
Results of the French STIC TPN 2005-2009 (submitted to publication in the WRR)

- 1099 patients included in 32 University and non-University Hospitals in France
- 100% positive effect on acute and chronic wounds, improvement in granulation tissue formation
- Helps prevent amputations
- Alternative surgical strategy
  - Simplified surgical procedure (skin graft)
  - Proposed as a waiting solution in reconstructive surgery to help reduce edema and infection in open fractures of the leg
Instillation: definition

- Bringing water to the ground in order to compensate for rain or a water reserve deficit in order to allow the full growth of plants

- instillation [in'stĭlə'shan] Etymology: L, instillare, to drip

- a procedure in which a fluid is slowly introduced into a cavity or passage of the body and allowed to remain for a specific length of time before being drained or withdrawn. It is performed to expose the tissues of the area to the solution, to warmth or cold, or to a drug or substance in the solution.

http://medical-dictionary.thefreedictionary.com/instillation
Instillation + negative pressure therapy?

- Theoretically ideal

- Lack of evidence-based medicine

- Lack of precision of liquid to instill: depending on the existence of bioburden
Literature


V.A.C. VeraLink™ Cassette

V.A.C. VeraFlo™ Dressing

V.A.C. Ulta™ Therapy Unit

Canister: 500 ml & 1000 ml

V.A.C. VeraT.R.A.C.™ Pad:
Double tubing (one delivering the wound solution; the other, the negative pressure)
Connected to the dressing by a single pad (similar to SensaT.R.A.C.™ Pad)
Personal experience

From January to December 2012

- Prescription and evaluation of 24 patients
- Clinical situations: Post-op dehiscence, haematoma, pressure ulcer, osteomyelitis, trauma wound, necrotising fasciitis
- Mean length of V.A.C. VeraFlo™ Therapy: 2 weeks
- Instillation solution: Saline
- Previous conventional V.A.C.® Therapy failure: 11
Female patient, 29 years

- 30/11: Complicated caesarean procedure for delivery with hysterectomy for severe haemorrhage
- 06/12: Failed surgical closure with deepening of the wound and fistula at the hysterectomy site
- 26/12: Second failed surgical closure
- 30/12: Conventional V.A.C.® Therapy
- 18/01: Wound unchanged
Female Patient, 29 years

- 23/01: V.A.C. VeraFlo™ Therapy initiated
- 02/02: satisfying evolution, filling deep cavities with granulation tissue
- 03/02: transfer to home with V.A.C.® Therapy
- 27/02: closure of the wound
Male Patient, 54 years

- Atypical bilateral sacral pressure ulcer after aorto-bifemoral revascularisation with suspicion of thrombosis of hypogastric arteries
- Conventional V.A.C.® Therapy initiated on 31/08,
- Septic shock on 3/09
- V.A.C. VeraFlo™ Therapy started 10/09
- Progressive granulation tissue formation
- Skin grafting on 10/10
Female Patient, 47 years

- Necrotising fasciitis
- Transferred from peripheral hospital on 5/11
- Excised the same day
- LOS 90cm by 45. Exposure of the thoracic wall
- V.A.C. VeraFlo™ Therapy helped prevent progression of infection
- Promotion of granulation tissue
- INTEGRA™ Matrix Wound Dressing (Integra Life Sciences Corp.) 2mm applied on 05/12
- Skin grafting on 23/12
Male Patient, 67 years
osteoarthritis 1st metatarsophalangeal joint
arteriopathy ABPI 0.6
Male Patient, 67 years
osteoarthritis 1st metatarsophalangeal joint
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Series realised in the Montpellier University Hospital

Results on 24 clinical cases
From January to December 2012

- Positive results: 23
  - Closure / edge reapproximation: 2
  - Closure / flap: 6
  - Closure / skin grafting: 6
  - Closure / Integra™ + skin grafting: 10

- Failure: 1
French experience

- A series of 131 clinical cases in three centers
- Using V.A.C. VeraFlo™ Therapy and saline in different clinical situations like exposed bones, necrotising fasciitis, undermined areas
- Positive results over granulation tissue even after a non productive conventional V.A.C.® Therapy period
- Saline instillation or intermittent negative pressure are potential causes of this boosting
Defining V.A.C. VeraFlo™ Therapy clinical applications

- Existence of severe comorbidities: diabetes, paraplegia, infection

- Failure of conventional V.A.C.® Therapy: 11/131 cases over the studied period with persistence of pathogen bacteria, necrotic debris, cavity wound or vascular insufficiency

- As a primary option on patients presenting a situation of non-healing prognostic (limb salvage)
Analysing the failure:
Female patient, 67 years

- Septicaemia and haematoma of the leg in a patient under anticoagulation
- Double cardiac valves destruction
- Conventional V.A.C.® Therapy for 4 weeks, ending with no granulation tissue formation and necrotic tissue
- V.A.C. Ultra™ Therapy: Reappearance of granulation tissue
- Stop V.A.C. Ultra™ Therapy: Renecrosis
- Late discovery of popliteal artery thrombosis
- Revascularisation using stent
- Failure and amputation
- Amputation
Debridement

V.A.C.® Therapy

V.A.C. VeraFlo™ Therapy 1 wk

V.A.C.® Therapy
V.A.C.® Therapy stopped
V.A.C. VeraFlo™ Therapy

2nd V.A.C. VeraFlo™ Therapy 1 wk

Thrombosis of popliteal artery
failure of revascularisation
amputation

2nd VVT 2 weeks Candidate to LDF
Choosing the instillation fluid?

- Saline (solution adopted by our team)
- HMB Prontosan® (B.Braun Medical Inc.)
- Topical antibiotic / antiseptic in chronic bone osteomyelitis proposed by Fleischmann and Jukema
What instillation tells us?

- Filling deep underminings is now possible
- More granulation tissue formation when the wound is poorly vascularised
- Less pain at dressing change
- Can be effective in helping to prevent necrosis
What instillation does not tell us (yet?)

- Rythm of dressing change
- Effect on bioburden
- Reduce the need for extensive debridement
Conclusion & Discussion of the V.A.C. VeraFlo™ Therapy Offer

- NPWT Instill with several options:
  - Saline
  - HMB
  - Topical antibiotic

- Selection depending on the local level of infection. Gradation following local bacterial virulence
Questions