



Irrigating Wound VAC for Complex Infections in the Hand

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Purpose

Management of major infections of the upper extremity and hand is predicated on effective reduction of the infectious agents, adequate debridement and optimization of the wound bed for subsequent reconstruction. While VAC-NPWT with irrigating component has been widely described in trunk, groin and lower extremity wounds it has not been reported (PubMed) in the hand and forearm. We present effective wound treatment with irrigating NPWT for a variety of severe infections of the hand, wrist and forearm.



Methods

From February 2015 to June 2017, one thirty one patients (131) at our Level 1 Trauma Center presented to the hand surgery service with early or late infections of the hand, wrist or forearm. Many with open wounds and exposed bone and tendon. Various infectious sources such as lacerations, animal bite injury, subcutaneous injection of illegal substances.

After aggressive intraoperative surgical incision and drainage, an assessment was made regarding suitability for placement of irrigating wound VAC dressings which were started with intermittent antibiotic fluid irrigation and NPWT at 125mm Hg continuously. Once wound control was achieved definitive reconstruction was undertaken with acellular dermal matrix and skin graft or flap closure



54 yo woman s/p IVD abscess and wide debridement and VAC tx, Integra and STSG

Results

From February 2015 to June 2017, all twelve (12) NPWT patients achieved complete resolution of infection and had stable wound coverage upon discharge.

The carpal osteomyelitis patient underwent 6 weeks of outpatient intravenous antibiotics with no detectable residual bone infection.

Five (5) of the NPWT patients had placement of ADM (Integra) over exposed tendons and muscles with complete granulation which accepted FTSG and STSG.

Healing rate was 100% with use of the wound VAC system.

Conclusions

1) Complex hand infections with exposed tendons, muscles, and bones can be treated with a high degree of success using irrigating NPWT.

2) Complex hand infections can be reconstructed with a combination of acellular dermal matrix and skin grafts on NPWT prepared upper extremity wounds.

3) Integra can successfully be applied under an irrigating VAC using ¼ Strength Dakin's irrigation