

Improved confidence with an innovative NPWT system

BACKGROUND

Fournier’s gangrene (FG) affects 1.6 out of 100,000 people (Broner, 2020). Treatment of FG includes aggressive surgical debridement and antibiotics; followed by NPWT (Doughty & McNichol, 2016). Published benefits of NPWT include: decrease length of stay, pain medication, improved patient comfort, quality of life and mobility. NPWT has demonstrated decreased valuable staff time (Bali et al., 2019).

FG patient’s acute care LOS is approximately 20 days and Long Term Acute Care Hospitals (LTACH) play a significant role in patients awaiting flap and graft reconstruction (Radcliffe & Kahn, 2020). Wound treatment for FG with NPWT can be complex requiring a solid skill set for dressing technique (Verbelen et al., 2011).

PROBLEM

NPWT is prematurely discontinued as FG wounds are frequently associated with significant exudate and located in difficult anatomical locations, which makes NWPT application difficult.

SIGNIFICANCE TO PRACTICE AND PAST MANAGEMENT

NPWT treatment is challenging. Our previous NPWT system was slow to address changes in fluid volume or viscosity and was discontinued due to difficulty of maintaining an intact dressing seal. Dressing integrity was further challenged when patients ambulate with bulky NPWT systems.

SOLUTION/ CLINICAL TREATMENT APPROACH

Last year, our LTACH adopted an innovative NPWT that dynamically adjusts to changing wound conditions and notably reduced the number of alarms and leakage when caring for FG patients. Using this innovative NPWT system and key dressing techniques our facility has had success managing patients with FG.

OUTCOMES AND CONCLUSION

Five patient FG case study: average wound reduction = 87%; average length of treatment 4.6 weeks.

Nursing staff stated that the new NPWT system was easier to use and the lighter weight significantly improved patient ambulation. Our high standards of wound care were maintained. Barriers to staff usage and patient ambulation significantly decreased.

References:

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TABLE 1

Description	Patient	M / F	Age	Weeks on NPWT	Initial Measurements (cm)	Final Measurements (cm)	Volume Reduction
Fournier’s Gangrene	A*	Male	53	5	46.0 x 27.0 x 5.0	13.0 x 9.0 x 0.1	100%
Fournier’s Gangrene	B	Male	77	5	17.0 x 4.0 x 5.0	13.0 x 2.0 x 1.0	92%
Fournier’s Gangrene	C	Male	44	4	10.0 x 8.0 x 6.0	4.0 x 2.5 x 0.3	99%
Fournier’s Gangrene	D	Male	42	4	18.0 x 5.0 x 3.3	13.2 x 3.0 x 3.0	60%
Fournier’s Gangrene	E	Male	49	5	35.0 x 23.0 x 9.0	30.0 x 12.0 x 0.3	85%
				4.6 Average			87% Average

*Closed with skin graft. Once the skin graft was placed, NPWT was discontinued.

