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A Pilot Study Exploring Quality of Life Experienced by Patients Undergoing Negative Pressure Wound Therapy As Part of Their Wound Care Treatment Compared to Patients Receiving Standard Wound Care

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OBJECTIVES

To explore satisfaction and quality of life experienced by patients undergoing negative pressure wound therapy (NPWT) as part of their wound care treatment in comparison to that of patients with a wound using traditional (standard) wound care therapies.

BACKGROUND

The use of Negative Pressure Wound Therapy (NPWT) has been widely documented as a technique to help heal complex wounds.

Investigating patient levels of satisfaction with the therapy delivered is pivotal to patient concordance.

This paper presents the findings of a preliminary study which aimed to explore quality of life experienced by patients undergoing negative pressure wound therapy (NPWT) as part of their wound care treatment in comparison to that of patients with a wound using traditional (standard) wound care therapies.

METHODS

A quasi-experimental study was undertaken, with patients treated in wound care/vascular clinics with chronic/acute wounds. 21 patients were analysed: 10 started treatment on NPWT and 11 on standard therapy.

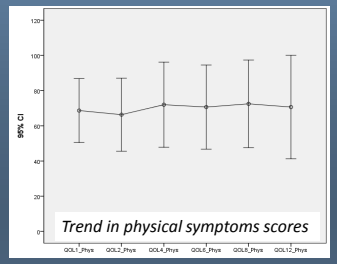
Quality of life (QoL) impact was measured using the Cardiff Wound Impact Schedule (CWIS) and administered post-consent at timed intervals. Controlled multivariate analyses were undertaken, utilising the individual components of the CWIS tool as outcome measures, at 1 and 2 weeks after treatment, to test the null hypothesis of no difference between the quality of life score in the patients who used NPWT and those who did not use NPWT as part of their wound care treatment. Further analyses of the effect of NPWT beyond 2 weeks was not possible due to insufficient numbers remaining on the therapy.

RESULTS

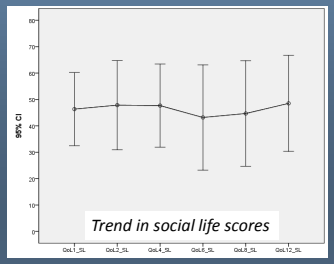
No real differences in quality of life scores were recorded by patients over the 12 week period on any scale. Figures show static series with overlapping confidence intervals

Mean (SD) of CWIS Quality of Life scores Weeks 1-12 (all patients)

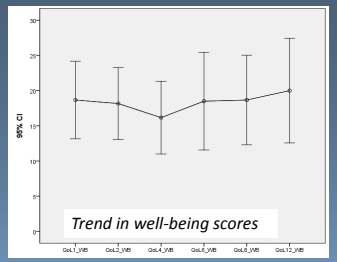
	Week 1	Week 2	Week 4	Week 6	Week 8	Week 12
Physical symptoms / daily living	81.4 (20.3)	80.7 (24.1)	83.5 (24.3)	82.9 (23.3)	87.7 (22.6)	87.3 (28.3)
Social Life	47.0 (12.4)	51.3 (13.1)	53.9 (12.8)	50.3 (15.5)	51.9 (15.4)	54.3 (16.6)
Well-being	21.2 (5.34)	20.4 (5.72)	21.5 (7.10)	22.1 (7.01)	22.7 (6.64)	23.3 (7.78)
Overall quality of life	11.0 (3.78)	11.4 (4.15)	11.6 (4.78)	10.7 (5.38)	11.4 (4.13)	12.5 (4.10)



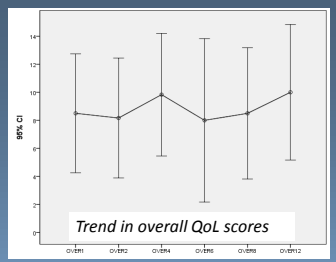
Trend in physical symptoms scores



Trend in social life scores



Trend in well-being scores



Trend in overall QoL scores

Data for patients with unhealed wounds partitioned by social isolation status indicates systematic differences between those living alone and those living with family

Mean (SD) of CWIS Quality of Life scores weeks 1-12 (by social isolation)

	Week 1	Week 2	Week 4	Week 6	Week 8	Week 12
Physical symptoms / daily living						
Live alone	55.5 (7.78)	66.5 (28.5)	71.0 (27.7)	70.0 (22.3)	73.3 (27.6)	75.0 (35.8)
Live with friends/family	77.8 (14.8)	84.9 (21.6)	88.1 (21.6)	85.7 (23.5)	92.6 (21.2)	93.4 (24.1)
Social Life						
Live alone	37.5 (0.71)	39.8 (9.98)	45.0 (13.6)	40.3 (11.4)	43.8 (15.5)	51.8 (17.4)
Live with friends/family	51.5 (12.4)	56.3 (12.7)	55.9 (12.5)	53.6 (17.7)	56.4 (16.4)	55.6 (17.2)
Well-being						
Live alone	16.5 (10.6)	16.3 (5.06)	17.3 (7.14)	19.0 (7.35)	20.3 (8.42)	19.0 (8.04)
Live with friends/family	21.7 (3.98)	23.4 (6.37)	22.6 (7.55)	23.0 (8.17)	24.9 (7.24)	25.4 (7.21)
Overall quality of life						
Live alone	4.00 (1.41)	4.50 (0.71)	8.00 (1.41)	2.50 (0.71)	5.00 (0.24)	6.00 (5.66)
Live with friends/family	12.2 (4.54)	12.2 (4.54)	12.3 (4.59)	12.0 (4.05)	12.0 (4.05)	13.2 (2.93)

RESULTS continued

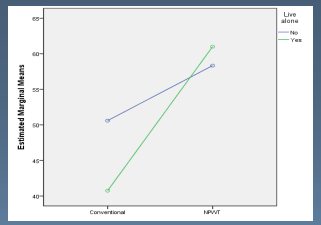
NPWT patients reported an increase in social life scores during the first 2 weeks of the application of therapy.

Mean (SD) of CWIS Quality of Life scores Weeks 1-2 (by therapy type)

	Week 1 mean (SD)	Week 2 mean (SD)
Physical symptoms / daily living		
NPWT	86.9 (21.8)	98.2 (23.1)
Standard therapy	75.8 (18.1)	73.9 (21.6)
Social Life		
NPWT	44.5 (13.6)	59.4 (12.8)
Standard therapy	46.3 (12.6)	48.2 (12.2)
Well-being		
NPWT	22.6 (4.90)	23.2 (7.53)
Standard therapy	19.8 (5.63)	19.3 (4.79)
Overall quality of life		
NPWT	11.3 (1.10)	13.4 (2.97)
Standard therapy	10.7 (1.34)	10.7 (4.39)

A substantive effect of therapy ($F_{(4,,9)}$=2.99; p=0.079); and a significant effect of social isolation on quality of life ($F_{4,9)}$=3.92; p=0.041) was reported after 1 week in controlled multivariate general linear models.

Profile plots indicated the presence of an interaction between social isolation and therapy on the social life component of the CWIS tool



CONCLUSIONS

NPWT shows some limited QoL benefit, particularly in the social life domain. A larger study including healed and unhealed wounds treated with both NPWT and standard therapy could help to assess the influence of NPWT on wound healing time.

REFERENCES

Ousey K, Milne J, Cook L, Stephenson J, Gillibrand, WP (2012) *A pilot study exploring quality of life experienced by patients undergoing negative pressure wound therapy as part of their wound care treatment compared to patients receiving standard wound care.* International Wound Journal ISSN17424801