Poster 0018

Exploring models of care in diabetic foot ulcer management: a cohort study

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BACKGROUND

- Diabetic foot ulcers (DFU) are highly prevalent, and are associated with significant morbidity, mortality, and health care costs[1]
- Given the complexity of DFU care, an interprofessional approach to management is essential

OBJECTIVE

- To assess the impact of an interprofessional team approach on DFU diagnosis and management

METHODS

- A retrospective cohort study of patients aged ≥ 18 years with DFU > 6 weeks attending regional home care community centres via access care centres (CCAC) from February 2013 – September 2014
- Following referral, patients underwent comprehensive assessment by an interprofessional team at a regional wound healing clinic
- The primary outcome was the precision of the initial diagnosis relating to DFU etiology. Secondary outcomes included wound healing and infection parameters
- Analysis of predetermined outcomes was conducted at a two-sided α of 0.05 using STATA 13.1 (College Stn., Texas)

RESULTS

Table 1: Baseline characteristics of study cohort at initial comprehensive assessment

Parameters	Cohort n = 49
Wound duration (weeks), median (IQR)	26.0 (10-52)
Wound size (cm^2), median	1.8 (0.6 – 7.0)
Male sex, No. (%)	33 (67.3%)
Age, mean (SD), y	64.2 (13.7)
Body Mass Index*, median (IQR)	28.7 (25.8 – 32.0)
Diabetes mellitus, No. (%)	49 (100.0%)
DFU complications, No. (%)	
DFU surgical interventions	15 (30.6%)
History of foot amputation (digit +/- forefoot)	8 (16.3%)
Comorbidities, No. (%)	
Current or historical smokers	19 (38.8%)
Heart disease	12 (24.5%)
Peripheral vascular disease	17 (34.7%)
Renal insufficiency	16 (32.7%)
Hypertension	33 (67.4%)
Dyslipidemia	27 (55.1%)
Known malignancy	4 (8.2%)
Arthritis	3 (6.1%)
Completed components at time of CCC referral, No. (%)	
Recent HbA1c measurement	5 (10.2%)
Neuropathy testing	0 (0.0%)
Footwear assessment	11 (22.4%)
Recent foot specialist assessment	11 (22.4%)
Provision of adequate foot care	5 (10.2%)
Provision of offloading footwear device	15 (30.6%)

Table 2: Wound care diagnostic and management outcomes by center

Outcome	CCC	Interprofessional team	p-value
Precise diagnosis, No. (%)	3 (6.12%)	42 (85.71%)	p < 0.001
Healability classification complete, No. (%)	22 (44.90%)	49 (100.0%)	p < 0.001
Vascular compromise identified, No. (%)	1 (2.04%)	7 (14.28%)	p =0.03
Bacterial damage identified, No. (%)	21 (42.86%)	35 (71.4%)	p = 0.04
Pain assessment complete, No. (%)	4 (8.16%)	49 (100.0%)	p < 0.001
Footwear/Offloading assessment, No. (%)	15 (30.60%)	49 (100.0%)	p < 0.001
Wound closure, No. (%)	2/49 (4.08%)	9/30* (30.0%)	p = 0.001
Dressing change frequency/week, mean (SD)	4.32 (1.69)	3.54 (1.90)	p = 0.035

CONCLUSION

- Interprofessional teams are associated with improved diagnostic and wound healing outcomes in DFU care
- We recommend interprofessional assessment initiatives to implement best practice interprofessional DFU care pathways into community settings

REFERENCES

1. World Health Organization. Global Health Estimates: Deaths by Cause A, Sex and Country, 2000-2012. Geneva, WHO, 2014..

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