

Pain is Under-recognized and Under-treated in Hemodialysis Patients

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Background

- Pain is commonly experienced by patients (pts) with end stage renal disease but is often under-recognized and under-treated
- Effective pain management improves pt's quality of life and is an integral component of pt care
- Recent studies have shown that ~ 50% of hemodialysis (HD) pts experience chronic pain, of which over 80% is moderate to severe in intensity
- Little is known regarding the prevalence, severity and management of pain in HD pts at St. Paul's Hospital (SPH)
- As part of a continuous quality improvement initiative, the Providence Health Care Renal End of Life Committee has developed and implemented pain management protocol

Purpose

- To determine the prevalence, severity, and management of pain at baseline prior to the implementation of the pain protocol

Methods

- Prospective cohort
- Study period: March-April 2010
- Inclusion criteria: Chronic dialysis pts attending in-centre HD unit at SPH >18 years of age
- Exclusion criteria: Unable to complete pain questionnaires in English or via an interpreter/caregiver
- All pts with ≥ 3 months of chronic pain were asked to complete Short Form Brief Pain Inventory (SF-BPI), plus Short Form McGill Pain Questionnaire (SF-MPQ) if having pain on day of interview
- From BC Provincial Renal Agency PROMIS database: Age, sex, ethnicity, marital status, HD vintage, co-morbidities
- Primary Objectives: To determine the prevalence and severity of pain
- Secondary Objectives: To determine 1) percentages of pts using non-pharmacological strategies, non-opioids, and opioid analgesics; 2) predictors of pain and pain severity
- Statistics: Descriptive analysis; Student's t test for comparing baseline characteristics of pts with vs without pain and of pts with mild vs moderate-severe pain

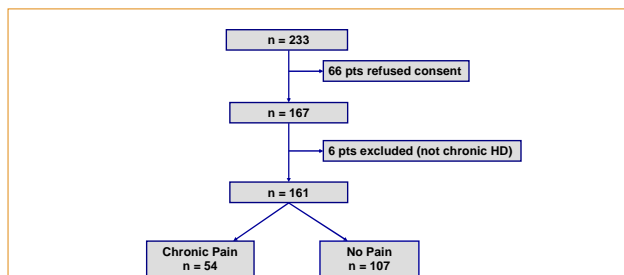


Figure 1: Patient Flowchart

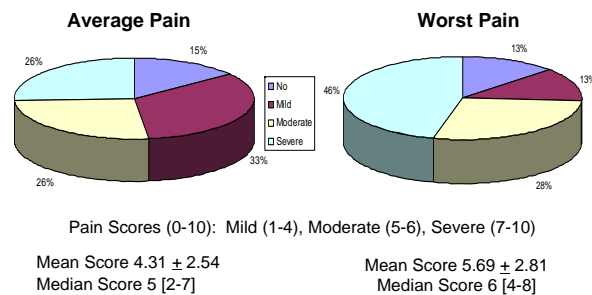


Figure 2: Brief Pain Inventory – Pain Within Last 24 hours (n=54)

McGill Pain Questionnaire

- Of 35 pts who completed SF-MPQ, the most common pain descriptors were aching and tiring-exhausting

Pain Treatment

- 30% pts had no treatment for their pain
- Of 70% treated, 34% had inadequate (≤ 50%) pain relief
- 82% treatment involved drugs while 18% was non-drug alone

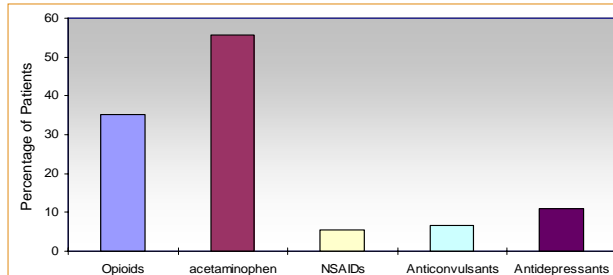


Figure 3: Pharmacological Treatment (n=54)

Table 1: Characteristics of Patients with Pain vs. No Pain

Baseline Characteristic	Pain (n = 54)	No Pain (n = 101)	p
Mean Age ± SD (yrs)	66 ± 15	69 ± 12	0.10
Male (%)	31 (57%)	72 (67%)	0.22
Ethnicity (%)			0.19
Caucasian	24 (44%)	41 (38%)	
Oriental Asian	10 (19%)	37 (35%)	
Marital Status (%)			0.08
Single	6 (11%)	10 (9%)	
Married/Common-law	19 (35%)	37 (35%)	
Median HD Vintage [IQR] (mos)	41 [11-72]	27 [9-55]	0.14
Co-morbidities (%)			
Diabetes	28 (52%)	50 (47%)	0.54
Hypertension	38 (70%)	81 (76%)	0.71
Cardiovascular Diseases	31 (57%)	44 (41%)	0.02

Table 2: Characteristics of Patients with Mild vs. Moderate to Severe Pain

Baseline Characteristic	Mild Pain (n = 26)	Moderate-Severe Pain (n = 28)	p
Mean Age ± SD (yrs)	63 ± 16	68 ± 13	0.19
Male (%)	15 (58%)	16 (57%)	0.97
Ethnicity –Caucasian (%)	12 (46%)	12 (43%)	0.81
Median HD Vintage [IQR] (mos)	46 [9-73]	37 [13-62]	0.99
Co-morbidities			
Diabetes	15 (58%)	13 (46%)	0.41
Hypertension	21 (88%)	17 (68%)	0.10
Cardiovascular Diseases	16 (67%)	15 (60%)	0.63

Limitations

- Significant percentage (28%) of pts refused consent; however, a similar proportion of pts in this group reported pain
- Small sample size may have limited statistical power to determine characteristics associated with prevalence and severity of pain
- Results from this single in-centre urban HD unit with consistent nephrologist coverage may differ in other units

Conclusions

- 34% reported pain in this HD cohort
- Of pts with pain, 30% are untreated and a large number of treated pts still reported pain
- Practitioners caring for HD pts should develop a systematic program for pain assessment and management in their units