Chronic Pain Poses a Significant Burden on Lives of Dialysis Patients

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Introduction

- Chronic pain is common in end-stage renal disease (ESRD) due both to multiple comorbidities as well as the dialysis treatment itself.[1]
- In an effort to incorporate patient-reported outcomes (PROs) in the delivery of dialysis care,[2] routine assessment of pain using a validated scale was started in 2016.
- Given differences in dialysis treatment and underlying health status, it is possible that pain perception and burden may differ for in-center hemodialysis (ICHD) and peritoneal dialysis (PD) patients.

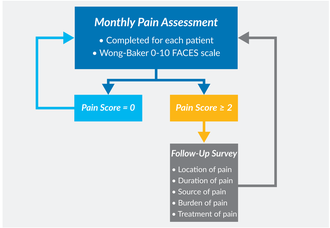
Objective

To assess the impact of pain on the daily life of ICHD and PD patients treated in a large dialysis organization (LDO)

Methods

- We evaluated responses to pain assessments among ICHD and PD patients dialyzying at an LDO between May 2016 and April 2017.
- Pain assessments are completed monthly by LDO nurses during the course of routine care (Figure 1).
- Patients reporting a pain rating ≥ 2 are asked to complete a follow-up survey to evaluate
  - Location of pain
  - Duration of pain
  - Source of pain
  - Effects of pain on daily life
  - Treatment of pain and use of pain medication

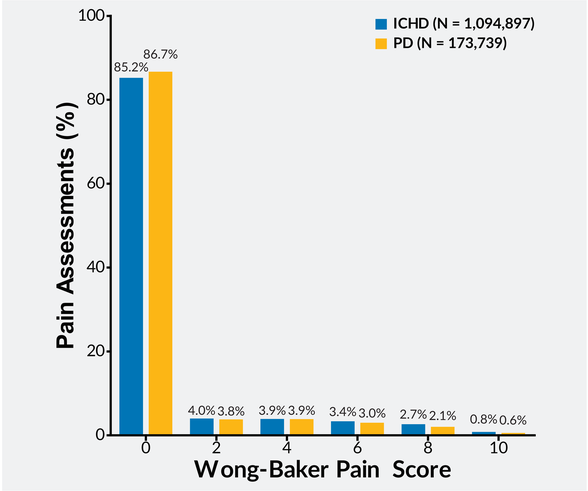
Figure 1. Pain Assessment Protocol for LDO Patients



Results

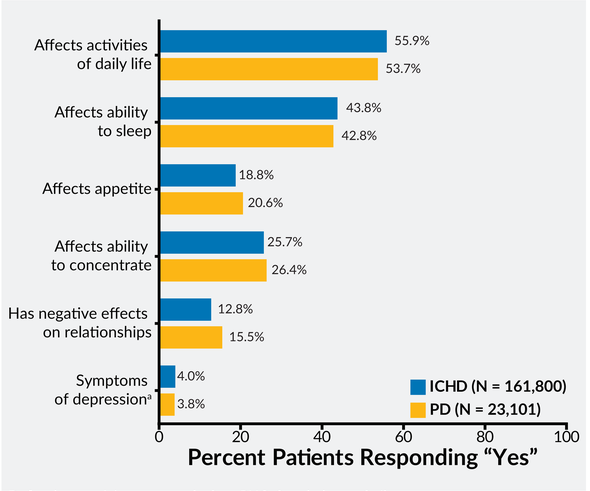
- The distributions of Wong-Baker pain assessment scores in ICHD and PD patients are displayed in Figure 2.
  - A total of 1,094,897 pain assessments were performed for ICHD patients (6.5 screenings per patient on average).
  - A total of 173,739 pain assessments were performed for PD patients (7.2 screenings per patient on average).
  - A total of 161,800 (14.8%) ICHD pain assessments had ratings ≥ 2.
  - A total of 23,101 (13.3%) PD pain assessments had ratings ≥ 2.
- Responses to follow-up questions characterizing the impact of pain on quality of life among patients reporting pain ratings ≥ 2 are depicted in Figure 3.
  - Both ICHD and PD patients reported that pain affected multiple aspects of their lives.

Figure 2. Distribution of Pain Scores for ICHD and PD Patients



- Table 1 characterizes the responses to follow-up survey questions regarding pain characteristics and treatment among patients reporting pain ratings ≥ 2.
  - ICHD patients were more likely to report dialysis-related pain (8.5% of responses vs 5.7% in PD) and pain of duration ≥ 3 weeks (73.8% vs 67.0%).
  - Back pain was the most common location reported for both modalities (data not shown).
  - Use of pain medications was more common in ICHD patients (74.8%) vs PD patients (65.1%).
  - For both modalities, acetaminophen was the most common pain medication used (~ 30% responses) followed by hydrocodone/ acetaminophen (ICHD 15.4%, PD 13.5%; data not shown).

Figure 3. Follow-Up Assessment: Impact of Pain on Quality of Life



[a] Defined as receiving a score of ≥ 2 on PHQ-2 scale (range 0-6)

Table 1. Follow-Up Assessment: Pain Characteristics and Treatment

		ICHD (N = 161,800)	PD (N = 23,101)
Pain is dialysis related	No	132,514 (91.5)	19,009 (94.3)
	Yes	12,313 (8.5)	1,153 (5.7)
Duration of pain	< 1 week	16,321 (11.4)	3417 (17.0)
	1-3 weeks	21,197 (14.8)	3232 (16.1)
	> 3 weeks	105,644 (73.8)	13,479 (67.0)
Currently taking pain medication	No	36,175 (25.2)	7044 (34.9)
	Yes	107,252 (74.8)	13,143 (65.1)
Pain is relieved by current medication [a]	No	16,509 (15.6)	2810 (21.8)
	Yes	89,214 (84.4)	10,102 (78.2)

[a] Among patients currently taking pain medication

Data presented as the frequency and percentage of answers for the respective question in the follow-up survey administered to those with an overall Wong-Baker score ≥ 2.

Summary and Conclusions

- Pain in dialysis patients contributes substantially to burden of disease, adversely affects activities of daily life, and likely contributes to depressive symptoms.
- Perception of pain and its impact were largely similar between ICHD and PD patients.
  - The dialysis treatment process may only play a marginal role with respect to pain
- There is a need to integrate pain management in the care of dialysis patients in order to optimize quality of life.

References

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