

Psychosocial factors associated with pain in patients treated by haemodialysis: a 2-month follow-up protocol

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Background

Haemodialysis (HD) is a vital treatment for many patients suffering from end-stage renal disease. Most studies on pain in HD report a prevalence of between 30 and 50%, often with moderate to intense pain (Davison & Jhangri, 2010; Gamondi et al., 2013). Pain can be a consequence of the renal disease or an associated disease, but can also be due to treatment: puncture pain, cramps, headaches, etc. (Bourbonnais & Tousignant, 2012). Moreover, pain in HD is often underestimated or inappropriately treated (Drappeau et al., 2011; El Harraqui, Abda, Bentata, & Haddiya, 2014; Zimmer-Rapuch et al., 2012). Most studies on pain in HD focus on the medical aspects and very few investigate the association with psychological factors. Yet in other chronic diseases, studies have shown that factors such as negative emotions, coping and personality traits are associated with pain (Goodin & Bulls, 2013; Radat & Koleck, 2011). Furthermore, HD is a specific treatment, especially regarding its duration. Patients undergo HD sessions for about 4 hours, 3 times a week, for many years. In this context, specific relationships can develop between patients and caregivers, mainly nurses, who happen to be the patient's first interlocutor regarding pain (Bourbonnais & Tousignant, 2012; Vioulac, Aubrée,

Massy, & Untas, 2016). Thus, the aim of this study is to assess the frequency of pain in patients undergoing HD and its association with various psychosocial factors over a 2-month period.

Methods

One hundred patients, treated by HD for at least 3 months, are being recruited in several treatment centres (hospitals and out-centres) in the Paris area and via a call for volunteers within a Patient Association (France Rein). At study entry, sociodemographic and medical data are collected and patients are asked to complete several self-reported scales measuring pain frequency, severity and perception (BPI, QDSA), personality and optimism (BFI, LOT-R), anxio-depressive symptomatology (HADS), specific pain-coping strategies (CSQ, CPCI), patient-healthcare professional relationships (4PAS) and quality of life (KDQOL-36). First, these measures take place at inclusion (T1) to establish a baseline. A second set of measures take place two months later (T2), with the same questionnaires, except for the personality variables that are stable over time. During this two-month period, patients also complete a short questionnaire, designed for the study, at every dialysis session. This questionnaire measures the participant's emotional state, pain (severity, type, etc.), communication about pain and perception of nurses' empathy during the dialysis session. At the same time, information is taken from their dialysis record, such as treatment given during the session. Latent growth modelling will be used to explore intra-individual and inter-individual changes in

pain and emotional state during the dialysis sessions as well as to identify profiles of patients at risk of experiencing pain. To complete these assessments, semi-structured interviews will be proposed to 20 patients who have experienced a significant level of pain during a dialysis session. The interviews, with a design inspired from the critical incident method (Flanagan, 1954), will allow an in-depth exploration of this specific pain event. They will focus on the patient's cognitions, emotions and behaviours at this moment, as well as on communication with the nurse. With the consent of the patient, a second interview will be proposed to the patient's nurse. This complementary interview will focus on the nurse's point of view, thus enabling a better understanding of the nursing staff's experience of the patient's pain. Nurses' interviews will follow the same design as those of the patients. A thematic analysis will be carried out on these interviews to highlight patients' and nurses' reactions during a pain event and how each can influence the other.

Current stage of the work

To date, 80 patients have been included, of whom about 50 have completed their participation. Sixty-two percent are male, aged from 19 to 86 years ($m = 57.71$). Fifty (62.5 %) participants were recruited in the Paris area. The preliminary results of the study ($n = 66$) confirm the high prevalence of pain in this population. More than half of the participants have declared pain at T1 (53.8 %), with a mean intensity of 6.7/10. The prevalence of anxiety (36.2 %) and depressive (23.4 %) symptoms is consistent with the literature (scores > 8). Therapeutic alliance with health care professionals is perceived as good ($m = 37.7/44$). The results show a correlation between this alliance and pain: higher pain is associated with a lower perceived alliance ($r = .27, p > .05$).

Discussion

This study is an ecological, close evaluation of patients' experience of dialysis sessions. The evaluation of pain during dialysis sessions over a two-month period will provide a precise idea of the frequency of pain in HD and its fluctuations between sessions in association with emotional state. The results of this study will help identify vulnerability and protection factors that can contribute to the occurrence and maintenance of pain in HD patients (personality, emotional state, coping strategies, and therapeutic alliance). They should also provide knowledge about the psychological profile of patients at risk of experiencing pain. This will enable health professionals, especially nurses, to identify which patients are more vulnerable and to adapt their behaviour and communication better in accordance with the patient and the situation. As the nurse is the patient's main interlocutor, it is essential for her/him to provide a personal response that corresponds to the patient's needs and personal characteristics. Results from the study should lead to clinical recommendations for pain management. They could also broaden training and highlight the psychosocial factors to consider in adapting patient care in HD, to increase its quality and efficiency and contribute to improving patients' quality of life.

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Introduction

- ✓ Haemodialysis is a vital treatment for patients suffering from End Stage Renal Disease (ESRD). Sessions last about 4 hrs, 3 times a week
 - ✓ 30 to 50% of patients treated by HD feel pain, including headaches, cramps and puncture pain during HD sessions (Stewart et al., 2002)
 - ✓ Psychosocial factors, such as personality, coping or depression and anxiety, can be associated with pain (Janda & Buhk, 2011; Satal & Gurek, 2012)
 - ✓ Dialysis nurses have a specific relationship with patients (Vachon et al., 2014) and are their first interlocuter regarding symptom management
- ➔ No research has investigated pain in ESRD with a longitudinal, session-to-session, follow-up

Objectives

- 1 Assess the frequency of pain and its evolution through hemodialysis sessions
- 2 Evaluate the association between pain and psychosocial factors
- 3 Identify profiles of patients at risk for pain

Population

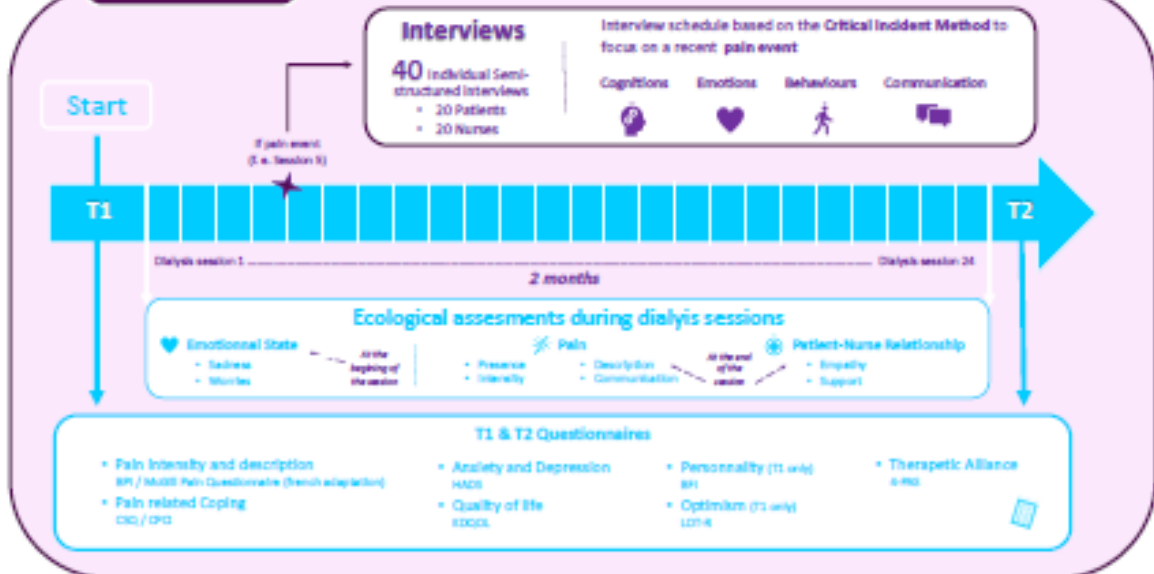
100 Patients Hemodialysis > 3 mois

20 Nurses working in HD centres

Recruitment

- 5 centres in the Paris area (hospitals and out-center)
- Volunteer call broadcasted through a patient association's journal (France Rein)

Procedure



Current stage

- 66** Patients included (47 completed their participation)
- 6** Interviews (3 Patients / 3 Nurses)
- 39** Patients have declared pain at T1 (59.8%)
- Mean Intensity = 6.7 / 10 (Min = 1 ; Max = 10)
- HADS**
 - Depression : Mean 5.9 Suspected depression 23.4% (N=9)
 - Anxiety : Mean 6.4 Suspected anxiety 36.2% (N=14)
- Therapeutic alliance**
 - Evaluation by the patient 37.7/ 44
 - BUT**
 - A higher level of pain is associated with a lower therapeutic alliance ($r = -.27$)



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