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Observational study

Assessment and treatment at a pain clinic: A one-year follow-up of patients with chronic pain

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HIGHLIGHTS

- This is a longitudinal observational study of patients at a pain clinic.
- Considerable pain and low health-related quality of life were reported at baseline.
- Patients treated at the pain clinic showed improvements at the one-year follow-up.
- Pain clinics need to collect comparable, valid data on a regular base to improve care.

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ABSTRACT

Background and aims: Pain is one of the most common reasons for patients to seek primary health care. Pain relief is likely to be achieved for patients suffering from acute pain, but for individuals with chronic pain it is more likely that the condition will persist. These patients have the option of being referred to specialised pain clinics. However, the complexity surrounding chronic pain patients is not well studied in these settings. This study aimed to describe patients with chronic pain referred to a pain clinic by using the information submitted during their first visit and one year later and also to identify associations between baseline characteristics and improvements in health-related quality of life in the follow-up.
Methods: This was a longitudinal observational study of a sample consisting of 318 patients referred to a pain clinic. One group of patients containing 271 individuals (median age 48, 64% females) was assessed and received conventional pain treatment (CPT group) and a second group of 47 patients (median age 53, 64% females) was assessed by a pain specialist and referred back to their physician with a treatment recommendation (assessment only, AO group). Patient-reported outcome measures in health-related quality of life (EQ-5D), pain intensity (VAS), mental health (HADS), insomnia (ISI), pain-related disability (PDI), kinesiophobia (TSK) and sense of coherence (SOC) were collected at the first visit and one year later.
Results: At baseline, the CPT group reported a low EQ-5D Index (median (md) 0.157) and EQ VAS (md 40) as well as considerable high, current pain intensity VAS (md 58), HADS anxiety (md 8), ISI (md 17), PDI (md 36) and TSK (md 39). The AO group showed similar problems (no significant differences compared to the CPT group), except for ISI, where the AO group reported less severe problems. At the one-year follow-up, the CPT group had a statistically significant improvement in EQ-5D, VAS, ISI, PDI and TSK. In the AO group no significant changes were observed. In the CPT group there was an association between a high ISI level at baseline and an improved EQ-5D Index in the follow-up.

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Conclusions: The study describes rarely explored groups of patients with chronic pain at a pain clinic. Severe pain problems were present in both groups at their first visit. A statistically significant improvement could be seen in the group that was conventionally treated while this was not the case among those subjects who were assessed and referred. The results imply, that relatively limited treatment strategies were helpful for the patients' health-related quality of life. Despite these improvements, the patients were not fully recovered, pointing to the chronicity of pain conditions and the need of support for many patients.

Implications: Increased knowledge about assessment, selection and treatment at pain clinics is important to improve the quality of the work performed at these clinics. Despite limited resources, further efforts should be made to collect comparable, valid data on a regular base from pain clinics in order to develop recommendation models.

1. Background

The conventional definition of chronic pain is a state lasting longer than three to six months (or the time needed for the injury to heal). This definition has been modified and now also includes the subject's experience in relation to dynamic interactions of physiological, psychological and social factors [1]. Neuroimaging studies support the view that chronic pain is a separate identifiable illness [2]. The development of chronic pain is due to several known and unknown factors. One contributing factor is sleep disturbance, which impairs endogenous pain inhibition [3]. Patients who suffer from chronic pain experience a life in a state with not only pain, but often also reduced quality of life and deteriorated mental health, sleep disorders and fatigue as well as sustained disability to perform daily tasks [4–9].

Pain relief has always been an important task for health care. Specialised pain clinics were developed after the Second World War based on the anesthesiological tradition of treating pain with nerve blocks and other pharmaceutical treatments. This was mostly successful regarding acute pain, but less apparent for chronic pain conditions [10]. To better cope with this, the bio-medical model was replaced by the bio-psychosocial model [1].

Systematic reviews showed evidence in favour of multidisciplinary/interdisciplinary treatment modalities compared to less comprehensive interventions for chronic musculoskeletal pain to improve quality of life and return to work despite difficulties to improve pain levels [11,12]. Recommendations for patients with other pain aetiologies often focus on pharmacological therapy, with little attention to the bio-psychosocial model or whether patients have their own ideas or desires for treatment [13,14].

In Sweden, primary care is the first line of treatment for patients with chronic pain, followed by the possibility to refer patients to pain clinics or pain rehabilitation units. Research on patients with chronic musculoskeletal pain and their treatment is frequent in the setting of rehabilitation clinics [15,16], but less common when it comes to pain clinics. The bio-psychosocial pain analysis is the first part of the work at the pain clinic and leads to a treatment plan. The pain analysis includes medical history and examination, supplementary investigations and assessment of psychosocial factors such as depression, anxiety or work-related issues [17,18]. Pharmacological therapy is often the basic approach in the treatment at pain clinics. At some clinics, the treatment can be extended to also include physiotherapeutic, educational and psychological treatment as well as invasive interventions.

Although treatment of patients with chronic pain at pain clinics is widespread, there are few studies reported from these settings [6,19–23]. To improve quality of care for patients at pain clinics, more knowledge is needed about the work, the referred patients and the treatment outcome [17,24]. Research in such a clinical context is challenging and needs to be pragmatic. However, it is almost impossible to perform randomised studies. Instead, selecting patients consecutively is a more realistic option.

This study aims to describe patients at a pain clinic, to follow them from their first visit to one year later and to identify associations between baseline characteristics and improved health-related quality of life (HRQoL) in the follow-up. The hypothesis is that there are significant improvements in HRQoL and reduction in pain intensity.

2. Material and methods

2.1. Study design

The study had a prospective and observational design. Patients treated with conventional pain treatment (the CPT group) at the pain clinic were followed from their first visit until one year later. In addition, patients who were referred back to the referring physician after assessment only (the AO group) were followed in the same way. Data were collected from patient questionnaires and medical records.

2.2. Setting

The pain clinic, at Södersjukhuset in Stockholm, Sweden, has broadened its treatment options in recent decades. Due to the complexity of treatment options, the team included members with different capabilities. The team consisted of physicians specialised in algology, anaesthesia, general medicine or rehabilitation medicine. In addition, there were nurses, a physiotherapist and a psychologist. To meet the patient's need, the team worked either as individuals, multidisciplinary (different professions loosely collaborating) or as an interdisciplinary team (regular team meetings leading to group decisions for planning, goal establishment and assessment of progress of the patient's situation).

Patients (≥18 years) were referred to the pain clinic for assessment or treatment from primary care and specialist units. A prerequisite for acceptance at the pain clinic was a complete medical examination and previous initial treatment of the underlying disease. Referrals were assessed by an interdisciplinary team and patients accepted for a visit were invited to a first appointment. This visit included a bio-psychosocial pain analysis and an individualised treatment plan. The treatment plan was then sent to the referring physician for information.

Patients referred for assessment only, identified at the first visit as being in need of minor or suitable interventions at other health care facilities, were referred back to their physician with a treatment plan, forming the AO group of this study. The majority of patients, assessed to benefit from CPT, continued their treatment at the clinic. The patients represented different categories of chronic pain conditions.

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