

Quality of life in chronic pancreatitis

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Abstract

In an era such as the present one in which there is a high demand for health services with the associated pressure of controlling spending, health care organizations are concerned about the cost-effectiveness of quality improvement interventions. On the other hand, the impact of the disease and the treatment on the patient's overall well-being and functioning has become a topic of growing interest not only in clinical research but also in practice. The clinical evaluation of the benefits of specific treatments for chronic, debilitating and incurable diseases should increasingly include formal assessment of patient activity and well-being. Thus, health-related quality of life as subjectively perceived by the patient, is becoming a major issue in the evaluation of any therapeutic intervention, mainly in patients with chronic or difficult diseases where the aim of the intervention is to keep patients either symptom-free and capable of living in the community for a long time or to reduce the discomfort caused by the disease. In this paper, we review the current knowledge on the quality of life assessment in chronic pancreatitis patients.

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INTRODUCTION

In the present era, there is a high demand for health services with the associated pressure of controlling

spending, health care organizations are concerned with the cost-effectiveness of quality improvement interventions. On the other hand, the impact of the disease and the treatment on the patient's overall well-being and functioning has become a topic of growing interest not only in clinical research but also in practice. The benefits of the specific treatments as well as the health-care system will be judged more and more on the basis of how the changes in the patient's activity or well-being correspond to his or her expectations. Thus, health-related quality of life as subjectively perceived by the patient, is becoming a major issue in the evaluation of any therapeutic intervention, mainly in patients with chronic or difficult diseases where the aim of the intervention is to keep patients either symptom-free and capable of living in the community for a long time or to reduce the discomfort caused by the disease. Several questionnaires have been developed to measure the health-related quality of life with the number of items ranging from 10 to 100; some of the questionnaires are designed for the assessment of a non-disease group while others were developed for specific disease groups.

CHRONIC PANCREATITIS

Chronic pancreatitis is a disease which is often characterized by recurrent episodes of abdominal pain accompanied by progressive pancreatic exocrine and endocrine insufficiency, and it sometimes requires multiple hospitalizations. The disease is frequently the result of chronic alcohol abuse even if other etiological factors such as genetic alterations, autoimmune disorders and obstructive disease of the biliary tract and the pancreas have recently been postulated. The management of chronic pancreatitis remains a challenging puzzle; for most patients, medical treatment is a good option, especially in those requiring substitutive therapy for either exocrine or endocrine insufficiency; however, controlling the pain remains the main therapeutic challenge. Although the medical management of pain may be one of the therapeutic modalities^[1], in the past as well as in the present, surgical management has been the main option in the case of intractable pain^[2]. In recent years, other therapeutic options, more medical than surgical, have been applied in clinical practice: endoscopic therapy^[3], thoracoscopic splanchnicectomy^[4], and extracorporeal shockwave lithotripsy^[5]. The mechanism of pain in chronic pancreatitis is certainly multifactorial and seems to be mainly based on two mechanisms: ductal hypertension, and

neural and perineural inflammation. The medical option is generally the first which is attempted based on NSAIDs and often on opioids but it is not always satisfactory and, before narcotic dependence develops, endoscopy or surgery should be considered. Endoscopic and surgical treatment is generally the first option when there is any cause of ductal hypertension; however, a surgical approach remains the main option for intractable pain. Other complications in patients with chronic pancreatitis are the formation of pseudocysts, fistulae, bleeding due to rupture of esophageal and/or gastric varices secondary to splenic or portal thrombosis, biliary and duodenal strictures, ascites, and superimposed carcinoma. All these complications require a multi-specialist approach, even if, in most cases, surgery remains the only option.

QUALITY OF LIFE EVALUATION

In the past few years, several self-administered questionnaires for the assessment of the quality of life have been developed. All the questionnaires have been constructed to evaluate two main domains: physical and mental well-being. The items contained in the various questionnaires vary greatly (from 6 to more than 130 questions) and the association of the different items permits the calculation of the various domains. Generally, a high score of the various domains corresponds to a good quality of life whereas a low score indicates a poor quality of life.

In recent years, many studies evaluating the quality of life in chronic pancreatitis patients have been published; these studies involved mixed medical-surgical patients^[6-9]. Three of these studies utilized a questionnaire called Medical Outcome Study 36-Item Short-Form Health Survey (SF-36)^[6-8] made up of 36 items and the most recent study, a questionnaire constituted by two different modules, the European Organisation for Research and Treatment of Cancer Quality of Life Questionnaire-C30 (EORTC QLQ-C30), made up of 30 items, and the Quality of Life Questionnaire pancreatic cancer module (QLQ-PAN26), made up of 26 items, which had previously been tested in pancreatic cancer patients^[9].

All four studies demonstrated that patients with chronic pancreatitis have a substantially impaired quality of life and, most importantly, the impairment of the quality of life in younger patients is higher than in older ones with obvious economic consequences for society.

Regarding gender, in the Italian study^[8], the impairment of various domains was more pronounced in females and this finding differs from that of the German studies^[6,7]. This may be explained, at least in part, by the fact that Italian females affected by chronic pancreatitis have a poor acceptance of the disease.

Among the various clinical variables examined as possible factors related to chronic pancreatitis (pancreatic calcifications, pseudocysts, Wirsung, duct dilatation, pancreatic insufficiency, diabetes), only pain was able to significantly impair all eight domains of the SF-36, thus confirming that pain control is the main therapeutic option to be taken into account in order to improve the quality of life in patients with chronic pancreatitis, thereby suggesting that much effort should be made in order to identify more

efficacious therapies capable of controlling this symptom.

Surprisingly, in the Italian study^[8], neither the type of pancreatic surgery nor endoscopic therapy were able to substantially modify the various physical and mental domains investigated by the SF-36; this is in contrast to previous studies regarding the various surgical and endoscopic options^[4,10-18], and such a difference may be due to the fact that these studies enrolled a highly selected group of patients with a short time interval between intervention and the assessment of the health-related quality of life (3-74 mo); another possible bias present in these surgical/endoscopic studies is that their data were not adjusted for sex and age.

It is worth noting that diabetes and major alterations of the Wirsung duct (which are expressions of long-standing chronic pancreatitis), as well as a decreased BMI (which is an expression of maldigestion) are able to impair some of the physical and mental domains^[6-8].

Co-morbidities were not significantly related to the quality of life of these patients^[6,8]; a possible explanation of this phenomenon is the fact that chronic pancreatitis *per se* determines a high impairment of the quality of life and co-morbidities add little, since these patients already had low values for most of the SF-36 domains.

An important point is that a percentage of patients varying from 4% to 10%^[8,9] missed responses or refused to complete the questionnaires. In the Italian study^[8], this group was better characterized; the patients who refused to complete the questionnaire were male patients, current smokers with a long duration of alcohol consumption, with a long duration of the disease, and free from pain at the time of the study. Patients with the above-mentioned characteristics are probably candidates for an intensive psychological approach in order to counter-balance their unwillingness to improve their relationship with the disease.

The main differences in the four studies exploring the quality of life in chronic pancreatitis patients^[6-9] are that the studies utilizing the SF-36 questionnaire had a control group taken from the general population^[6-8] whereas the study utilizing the EORTC QLQ-C30 and the QLQ-PAN26 did not^[9]; the studies utilizing the SF-36 had a wide number of chronic pancreatitis patients coming from the country where the studies were carried out whereas the study utilizing the EORTC QLQ-C30 and the QLQ-PAN26 enrolled 66 patients coming from four different countries (Germany, Italy, South Africa, and United Kingdom); finally, all the patients utilizing the SF-36 questionnaire were fluent in the native language^[6-8] whereas Afrikaans-speaking patients in South Africa completed the English version of the EORTC QLQ-C30 and the QLQ-PAN26. Since in clinical practice, there is the need to utilize a time-saving questionnaire to assess the quality of life, we have recently carried-out a study utilizing a short version of the SF-36 questionnaire named SF-12 (Medical Outcome Study 12-Item Short-Form Health Survey)^[19]. The aim of this study was to establish the validity of the SF-12 questionnaire in patients with chronic pancreatitis and to identify the predictors capable of modifying the physical (PCS) and mental (MCS) summaries in these patients. The SF-12 and the SF-36 questionnaires were used. One hundred and forty-one patients with proven

chronic pancreatitis were studied. The chronic pancreatitis patients had SF-12 physical (PSC-12) and mental component (MCS-12) summaries significantly related to the PCS-36 and MCS-36 ($P < 0.001$). The presence of pancreatic pain and non-pancreatic surgery accounted for 41.3% in the formation of the PCS-36 score and 37.2% in that of the PCS-12 score, respectively. Gender, BMI, and pancreatic pain accounted for 15.3% of the information in the formation of the MCS-36 and for 14.7% in that of the MCS-12; using these clinical variables, the loss of information in applying the SF-12 instead of the SF-36 was very low (4.6% and 0.6% for the PCS and the MCS, respectively). Thus, the SF-12 seems to be a good alternative to the SF-36 in assessing the quality of life in chronic pancreatitis.

CONCLUSION

The conclusions that can be drawn from studies which have assessed the quality of life in chronic pancreatitis patients are the following: it is necessary to choose a widely accepted questionnaire concerning the quality of life in order to render the various studies in different populations of chronic pancreatitis patients comparable and we need further studies comparing the various questionnaires in order to identify the questionnaire which could be the most useful in routinely evaluating our patients in the office. At present, the SF-12 questionnaire is the instrument of choice to assess the quality of life in the doctor's office. The presence of papers assessing the quality of life in chronic pancreatitis patients leads us to believe that all future studies on the management of chronic pancreatitis should include a validated questionnaire in order to evaluate the point of view of the patient on the various treatments employed^[20].

We recommend the routine use of QoL questionnaires to assess the well-being of patients with chronic pancreatitis in order to select those who need a more intensive medical and psychological approach. However, we could couple the QoL assessment with traditional clinical methods to evaluate the therapeutic effects of the various medical approaches.

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