

## The Quality of Life in Chronic Pancreatitis: The Clinical Point of View

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*You do not want to simply prevent death,  
but to improve the quality of life;  
to bright somebody's day.  
Make patients laugh.*

**Patch Adams** (From the movie "Patch Adams")

In the era like the present time in which there is an high demand of health services with associated pressures to control spending, health care organization are concerned with the cost-effectiveness of quality improvement interventions [1]. On the other hand, the impact of disease and 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 [2, 3]. The benefits of the specific treatments as well as the health-care system will be more and more judged on the basis on how much the changes in the patient's activity or well-being will correspond to their expectations. Thus, health related quality of life, subjectively perceived by the patient, is becoming a major issue in the evaluation of any therapeutic intervention, mainly in patients with chronic or hard to cure diseases, where the aim of the intervention is to keep patients either symptom free and able to live in the community for a long time, or to reduce the discomfort caused by the disease. Several questionnaire have been developed to measure health-related quality of life with a number of items ranging from 10 to 100 items: some of the questionnaires are

designed for the assessment of non-disease group, while others were developed for specific disease groups.

Chronic pancreatitis is a benign disease often characterized by recurrent episodes of abdominal pain accompanied by progressive pancreatic exocrine and endocrine insufficiency, and it sometimes requires multiple hospitalizations [4]. The disease is frequently the result of chronic alcohol abuse, even if, recently, other etiological factors have been postulated such as genetic alterations, autoimmune disorders and obstructive disease of the biliary tract and the pancreas [5]. 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 for endocrine insufficiency; however, controlling the pain remains the main therapeutic challenge. Although medical management of pain may be one of the therapeutic modalities [6], in the past as well as in the present, surgical management has been the main option in the case of intractable pain [7]. In recent years, other therapeutic options, more medical than surgical, have been applied in clinical practice: endoscopic therapy [8], thoracoscopic splanchnicectomy [9], and extracorporeal shockwave lithotripsy [10]. Many studies evaluating the quality of life in chronic pancreatitis have recently been published; these studies involved mixed

medical-surgical patients [11, 12, 13, 14]. Three of these studies utilized a questionnaire called Medical Outcome Study 36-Item Short-Form Health Survey (SF-36) [11, 12, 13] 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) and the Quality of Life Questionnaire Pancreatic Cancer Module (QLQ-PAN26), which had previously been tested in pancreatic cancer patients [14].

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 [13], the impairment of various domains was more pronounced in females: this finding differs from the German studies [11, 12]. 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, 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, suggesting that much effort should be made in order to identify more efficacious therapies capable of controlling this symptom.

Surprisingly, in the Italian study [13], 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 [9, 15, 16, 17, 18, 19, 20, 21, 22, 23], 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 the intervention and the assessment of the health-related quality of life (3-74 months); 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 physical and mental domains [11, 12, 13].

Comorbidities were not significantly related to the quality of life of these patients [11, 13]; a possible explanation of this phenomenon is the fact that chronic pancreatitis *per se* determines a high impairment of the quality of life and comorbidities add truly little, since these patients already had low values of most of the SF-36 domains.

An important point is that a percentage varying from 4 to 10% [13, 14] missed responses or refused to complete the questionnaires. In the Italian study [13], this group was better characterized; the patients who refused to complete the questionnaire were mainly male patients, actual smokers with a long duration of alcohol consumption, with a long duration of the disease, and free of 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 of the four studies exploring the quality of life in chronic pancreatitis patients [11, 12, 13, 14] are that the studies utilizing the SF-36 questionnaire had a control group constituted by the general population [11, 12, 13], whereas the study utilizing the EORTC QLQ-C30 and the QLQ-PAN26 did not [14]; 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 [11, 12, 13], whereas Afrikaans-speaking patients in South Africa completed the English version of the EORTC QLQ-C30 and the QLQ-PAN26 [14].

Because 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) [24]. 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-forty-one patients with proven chronic pancreatitis were studied. The chronic pancreatitis patients had the 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.

The conclusions that we can draw from the studies which have assessed the quality of life in chronic pancreatitis patients are the following: it is necessary to choose a widely accepted questionnaire on 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 is 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 doctor office. The presence of papers assessing the quality of life in chronic pancreatitis patients leads that all future studies on the management of chronic pancreatitis should include a proven effective questionnaire in order to evaluate the point of view of the patient on the various treatments employed.

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**Keywords** Pancreatitis; Pancreatitis, Alcoholic; Quality of Life; Questionnaires

**Abbreviations** EORTC QLQ-C30: European Organisation for Research and Treatment of Cancer Quality of Life Questionnaire-C30; QLQ PAN26: Quality of Life Questionnaire-PAN26; SF-12: Medical Outcome Study 12-Item Short-Form Health Survey; SF-36: Medical Outcome Study 36-Item Short-Form Health Survey

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