Impact of Hyperhidrosis on Quality of Life and its Assessment

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KEYWORDS

• Hyperhidrosis • Impact • Quality of life • Dermatology Life Quality Index
• Hyperhidrosis Disease Severity Scale • Hyperhidrosis Impact Questionnaire • Botulinum toxin
• Endoscopic thoracic sympathectomy

KEY POINTS

- Primary focal hyperhidrosis severely affects many aspects of daily life including emotional well-being, interpersonal relationships, leisure activities, personal hygiene, work and productivity, and self-esteem.
- For evaluation of its impact on patients, disease-specific questionnaires, such as the Hyperhidrosis Disease Severity Scale, the Clinical Protocol for Quality of Life, and the comprehensive Hyperhidrosis Impact Questionnaire, have been developed.
- Limitations of hyperhidrosis as a dermatologic condition are commonly measured by the Dermatology Life Quality Index. The 36-item Short Form Health Survey is the most established instrument for recording the impairment of general health-related quality of life in patients with hyperhidrosis.
- Assessment of quality of life in patients with primary focal hyperhidrosis has particularly been used to prove the substantial benefits of endoscopic thoracic sympathectomy and botulinum toxin treatment.

INTRODUCTION

It has been known for a long time that hyperhidrosis is a stigmatizing condition that may severely affect many aspects of daily life including emotional well-being, interpersonal relationships, leisure activities, personal hygiene, work and productivity, and self-esteem. In 1977, Adar and colleagues[1] pointed out that hyperhidrosis caused considerable social, professional, and emotional embarrassment in their patients with primary palmar hyperhidrosis (PPH), and claimed that sympathectomy led to improved quality of life (QoL). The first time the term QoL in context with hyperhidrosis appeared in the heading of a medical publication was in a short comment on therapeutic options in the Swedish medical journal *Läkartidningen*.[2] However, serious efforts to scientifically evaluate the impact of hyperhidrosis on patients lasted until the turn of the century after endoscopic thoracic sympathectomy (ETS) and injections of botulinum toxin were introduced in the therapeutic armamentarium of primary focal hyperhidrosis (PFH).

General limitations caused by PFH include feelings of embarrassment, shame, insecurity, frustration, unhappiness, and depression. Patients often have a low self-esteem and lack of

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self-confidence. Difficulties with social and intimate relationships may lead to reclusiveness and avoidance of social interactions and leisure activities. Individual patients may even perceive suicidal ideation. Moreover, patients may experience functional restraints and may be compelled to adapt their behavior depending on whether axillae, palms, soles, or other sites are involved. For example, patients with primary axillary hyperhidrosis (PAH) spend much time and energy on their personal hygiene, whereas PPH often results in occupational impairment.[3] Further site-related handicaps are summarized in **Box 1**. In addition, PFH markedly increases site-specific risks of cutaneous infection, especially pitted keratolysis, dermatophytosis, and vulgar/plantar warts.[4] The detriments of affected patients may be exacerbated by low awareness of PFH as a treatable medical condition and the little importance given to the patient's complaints by others.

This article gives an overview on attempts to substantiate the various limitations induced by PFH beyond objectively verifiable measurement of sweat production and delineation of the hyperhidrotic area by the Minor iodine starch test. Questionnaires used for evaluation are classified into disease-specific instruments, those devoted to common limitations in dermatologic conditions, and those measuring general health-related QoL or certain aspects of impairment. With few exceptions, QoL assessment in hyperhidrosis has been used to prove the efficacy of therapeutic interventions, such as ETS, botulinum toxin treatment, and more recently oral anticholinergic drugs.

Box 1
Selection of site-specific handicaps caused by PFH

Primary axillary and inguinal hyperhidrosis

- Soaking, staining, and soiling of clothing
- Restriction in the choice of clothing
- Need for frequent showering and change of clothing

Primary palmar hyperhidrosis

- Difficulties in manual activities and in handling objects, such as in writing, drawing, playing musical instruments, knitting, car driving, opening doorknobs, and handling balls in sports
- Dropping of glass objects from hands
- Soiling of paper and artwork
- Avoidance of hand shaking
- Electrical shocks to moist hands in mechanics and electricians
- Corrosion of metal objects
- Need for wiping hands dry

Primary plantar hyperhidrosis

- Soaking, staining, and destruction of shoes
- Difficulties in wearing sandals, slippers, and flip-flops
- Difficulties when walking barefoot
- Need for wearing absorbing socks

Primary craniofacial hyperhidrosis

- Dripping of sweat drops on objects or persons when bent forward
- Soaking of collars
- Need for wiping scalp and face dry

DISEASE-SPECIFIC ASSESSMENT OF QoL

Hyperhidrosis Disease Severity Scale

The Hyperhidrosis Disease Severity Scale (HDSS) is a single-item question allowing 4 gradations of the tolerability of sweating and its interference with daily activities (**Table 1**). This simple, validated diagnostic tool offers a quick way to estimate the impairment of QoL caused by sweating. A score of 3 or 4 indicates severe hyperhidrosis, a score of 2 moderate hyperhidrosis, and a score of 1 absence of hyperhidrosis.

The HDSS was introduced in 2004 to determine the prevalence of hyperhidrosis in the United States from a representative sample of 150,000 households.[5] The overall prevalence of hyperhidrosis was estimated at 2.8% in the general population, the prevalence of axillary hyperhidrosis at 1.4%, and the prevalence of severe axillary hyperhidrosis corresponding with HDSS scores 3 or 4 at 0.5%.

In a large prospective open-label study in 142 Canadian patients with PAH treated with botulinum neurotoxin type A (BoNT/A), HDSS scores

Table 1
The Hyperhidrosis Disease Severity Scale

Question: How Would You Rate the Severity of Your Hyperhidrosis?	Score
My sweating is never noticeable and never interferes with my daily activities	1
My sweating is tolerable but sometimes interferes with my daily activities	2
My sweating is barely tolerable and frequently interferes with my daily activities	3
My sweating is intolerable and always interferes with my daily activities	4

of 3 or 4 served as inclusion criteria.[6] Four weeks after treatment, 85% of patients were classified as treatment responders achieving an HDSS score of 1 or 2, and 59% of patients noted complete resolution of their symptoms, as indicated by an HDSS score of 1. Only patients with PAH with HDSS scores of 3 and 4 were included in a US placebo-controlled study on the efficacy and safety of 2 different doses of BoNT/A (75 U or 50 U per axilla).[7] An improvement of at least 2 points in HDSS score from baseline 4 weeks after the first treatment was indicated by 75% of subjects in both the BoNT/A 75-U and 50-U groups compared with 25% of subjects in the placebo group.

Site-specific HDSS scores were obtained in 152 patients with severe PPH before and about 1 year after ETS in order to compare clamping versus cutting of the sympathetic nerve at the T3 level.[8] No significant differences were found. Campanati and colleagues[9] examined the relapse-free survival in 41 patients with PPH and 38 patients with PAH treated with BoNT/A. Relapse was defined as 2-point worsening of the achieved HDSS score. Duration of the therapeutic effect was not significantly influenced by disease-related QoL impairment before treatment. In a German randomized, placebo-controlled study on the efficacy and safety of methantheline bromide in 339 patients affected by PAH and palmar-axillary hyperhidrosis, the mean HDSS scores decreased after 4 weeks in the verum group from 3.2 to 2.4 compared with 3.2 to 2.7 for placebo.[10] The HDSS was used to intraindividually compare the effectiveness of suction curettage to 1 axilla and BoNT/A injections to the contralateral side in 20 patients with PAH.[11] Toxin injections induced a larger decrease in HDSS scores than surgery at 3 and 6 months after intervention.

In recommendations for the treatment of PFH the Canadian Hyperhidrosis Advisory Committee pointed out the HDSS as a valuable method to tailor treatment based on disease severity.[12] The investigators defined treatment success as an improvement from an HDSS score of 4 or 3 to a score of 2 or 1 or from a score of 2 to 1. Treatment failure was defined as no change in HDSS score after 1 month of therapy or lack of tolerability for the treatment.

The HDSS also showed the effectiveness of BoNT/A treatment in severe compensatory hyperhidrosis of the trunk[13] and of oral oxybutynin in postmenopausal hyperhidrosis.[14]

Similar to the HDSS, the Quality of Life Index is a single-item question rating the impact of the disease on QoL on a scale from 0 (no effect) to 3 (major/significant effect).[15,16]

Amir–de Campos Clinical Protocol for QoL

In 2000, Amir and colleagues[17] described the development of a short, disease-specific questionnaire for assessment of the impact of PFH relying on in-depth interviews with patients. Based on this preliminary tool, de Campos and colleagues[18] devised an instrument, later termed the Clinical Protocol for Quality of Life, and applied it to 378 patients with predominantly PPH before and at least 30 days after ETS. The investigators noted a much better QoL in 75.7% and a slightly better QoL in 10.7% of patients after surgery.

The questionnaire includes 1 general question asking for overall QoL reduction and 20 questions belonging to 4 domains covering compromising effects on (manual) function and social activities (writing, manual work, leisure, sports, hand shaking, socializing in public places, grasping objects, social dancing), personal limitations with the partner (holding hands, intimate touching, intimate affairs), emotional impairment (need for justification, feeling of rejection by others) and restrictions under special circumstances (in closed or hot environment, when tense or worried, when thinking about the problem, before an examination/meeting/speaking in front of people, when wearing sandals/walking barefoot, when wearing colored clothes, when having problems at school/work). Every question has 5 levels of response displayed in a table with only 1 answer allowed. The summed total score may range from 20 to 100, with higher levels indicating greater severity and poorer QoL. The result may be ranked to one of 5 levels of QoL impairment (total score 84–100, very poor QoL; 68 to 83, poor QoL; 52–67, good QoL; 36–51, very good QoL; and 20–35, excellent QoL). Improvement of QoL after treatment is rated accordingly.

Since this original publication, the protocol has been extensively used by the São Paulo group of vascular and thoracic surgeons[19–27] and some other investigators[28–32] to prove the efficacy of ETS in PFH. In a large retrospective analysis of 453 patients with PPH and PAH, Wolosker and colleagues[26] found that the QoL had improved in 90.9% of patients around 30 days after surgery and that this effect was sustained in almost all of them until the fifth postoperative year. Stable amelioration of QoL as measured by the Amir–de Campos and the Keller protocols (discussed later) 5 years after ETS surgery for upper limb hyperhidrosis was confirmed in 174 Austrian patients provided that compensatory sweating and recurrence were not severe.[32] Another evaluation by the São Paulo group revealed that 855 patients with very poor QoL scores before ETS surgery benefited on average much more in terms of QoL

improvement than 312 patients with poor QoL.[24] The same result was observed for both the PPH and PAH subgroups. There were no significant differences between genders with regard to QoL improvement.[23] Differences that were similarly small were evident when comparing the outcome after different methods of surgery[30] or intervention at distinct ganglion denervation levels.[19,21,22,25] The variable postoperative degree of compensatory hyperhidrosis depending on the level of surgery was not always reflected in the results of QoL assessment by this protocol.[19]

One study comparing the effects of ETS and BoNT/A injections in PPH showed quick and similarly strong improvement of QoL scores in both groups.[29] After 6 months, QoL had mildly worsened in the surgical group and there was a more marked decreased in patients treated with BoNT/A.

In recent years, Wolosker and colleagues[33–37] extended the use of the Amir–de Campos protocol to the evaluation of the initial treatment of patients with PPH and PAH with the oral anticholinergic drug oxybutynin. After 12 weeks, QoL improvement was noted in approximately 70% of patients, with dry mouth being virtually the only adverse effect. An adapted version of the protocol with total scores ranging from 17 to 85 was applied to 45 children with PPH aged 7 to 14 years.[38] The median QoL total score decreased from 73 before to 36 after 6 weeks of oxybutynin treatment, and reduction was noted in 70% of patients. Best responses were seen in children with very poor pretreatment QoL.

Hyperhidrosis Impact Questionnaire

Hyperhidrosis characteristics, use of medical resources, and functional limitations in daily activities caused by hyperhidrosis are explored by the Hyperhidrosis Impact Questionnaire (HHIQ).[3] The 41-item instrument was developed by collaborators of the University Hospital Würzburg and Allergan and is based on a thorough literature review and on qualitative interviews with physicians and ex-patients of our outpatient hyperhidrosis clinic.[39] The validated questionnaire includes items on disease characteristics, use of medical resources, employment and productivity, various daily activities, and psychological and emotional well-being. Each item is individually scored.

In a large study on 345 patients with PFH, mainly PAH and PPH, compared with 154 healthy controls, 63% of affected patients reported that they were moderately to extremely limited at work, and 44% reported that their sweating resulted in moderate to extreme impairment of their effectiveness at work.[3] Almost half of the patients (42%) claimed that their sweating had prevented them from following a particular career path. Nearly three-quarters of patients with hyperhidrosis (74%) complained of being emotionally damaged or injured to a moderate to extreme degree. Most patients reported feeling less confident than they would like (74%) and to be unhappy or depressed (63%), with a higher proportion of axillary than palmar patients (71% vs 54%). Many patients reported being moderately to extremely limited in social situations such as meeting people for the first time (71%), in developing personal relationships (59%), in participating in family events or spending time with friends (54%), and in sexual activities (34%). As expected, patients with PPH were significantly more limited in shaking hands than those with PAH (97% vs 33%), whereas patients with PAH were more limited in staying in public places (65% vs 45%). Significantly more patients with PAH than with PPH reported decreasing their leisure time (59% vs 41%) and missing activities with family and friends (59% vs 41%). With regard to physical impairment, more patients with PAH than with PPH changed their clothes at least twice a day (70% vs 31%), spent at least 15 minutes per day treating their symptoms (38% vs 22%), and showered or bathed at least twice daily (27% vs 10%).

Parts of the HHIQ were used in the investigation of the US prevalence of hyperhidrosis.[5] People with axillary hyperhidrosis and HDSS scores of 3 and 4 most frequently indicated moderate to extreme limitations in meeting people (46.7%), in romantic/intimate situations (46.0%), in sports (45.9%), being in public places (45.8%), and in developing personal relationships (37.0%). Most of them reported reduced self-confidence (69.8%), frustration with certain daily activities (58.2%), and feeling unhappy (54.8%).

The questionnaire was also applied to the participants of several large placebo-controlled studies on the effectiveness of BoNT/A treatment in PAH.[6,40,41] In contrast with placebo groups, limitations in personal relationships and social situations, reduction of the performance and productivity at work, and impact of the disease on the emotional status improved significantly after BoNT/A injections. The most dramatic changes were noted in the ability to perform daily tasks and work activities and in the degree of limitation on being in public places, on meeting people for the first time, and on developing personal relationships.[6,40,41]

Other Hyperhidrosis-specific Instruments

Keller and colleagues[42] introduced a scale with a series of 15 questions addressing the common

physical symptoms and social stigmata associated with PFH in daily life. Five questions address problems of palmar sweating in certain situations, such as shaking hands, writing an examination, initiating intimate contact, driving a car, and wearing gloves. Likewise, 5 questions each reflect limitations caused by excessive axillary and plantar sweating. The Keller scale has repeatedly been used by thoracic surgeons from Vienna to prove the beneficial effect of ETS.[32,43–45] In addition, this group tried to quantify the severity of sweating before and after surgery by a visual analog scale graded between 0 (no symptoms) and 10 (worst possible symptom) (the Hyperhidrosis Index). Postoperative results were better in patients with PPH than in those with PAH and much better than in patients with primary plantar hyperhidrosis.[43,44] QoL improvement, as assessed by the Keller scale, was also shown in 36 patients with PFH treated with oral glycopyrrolate.[31]

A large number of investigators preferred self-made disease-specific questionnaires for QoL evaluation before and after treatment, in most instances ETS.[8,46–65] Interviews by telephone or e-mail were sometimes done to complete missing answers. Detailed information for the issues covered by the particular questionnaires is beyond the scope of this article and is presented in only some of the articles.[49–52,58,61] Only rarely, attempts to verify the validity and reliability of the instruments are described,[47] putting their general usefulness into question.

DERMATOLOGY-RELATED ASSESSMENT OF QoL

Dermatology Life Quality Index

The Dermatology Life Quality Index (DLQI) developed by Finlay and Khan[66] in 1994 is the most frequently used instrument to measure the effects of dermatologic diseases on QoL. The simple, validated questionnaire consists of 10 items covering 6 domains: symptoms and feelings, daily activities, leisure, work and school, personal relationships, and treatment. Each item has 4 gradations (3, very much; 2, a lot; 1, a little; 0, not at all/not relevant). Total scores range from 0 to 30, with higher scores indicating greater impairment.

In our study, the 345 patients with PFH had a mean DLQI total score of 9.2.[3] Patients with PAH had a score of 10.0 and those with PPH had a score of 8.8, compared with 0.7 in healthy controls. Greatest impairments were observed for the daily activities and symptoms/feelings domains. The mean daily activities score was significantly higher in patients with PAH than in patients with PPH, whereas the latter had significantly higher mean treatment scores.

Investigators from Sweden were the first to use the DLQI for assessing QoL before and after treatment.[67] In 58 patients treated with BoNT/A for PPH, PAH, and plantar hyperhidrosis they noted a decrease of the mean DLQI score from 9.9 at baseline to 2.4 after treatment. In a Canadian group of 146 patients with PAH the mean DLQI score decreased from 10.6 at baseline to 1.7 after 4 weeks.[6] Apart from investigation in patients with the most frequent types of PFH,[9,68–71] significant reductions of mean DLQI scores were also found after BoNT/A treatment of compensatory hyperhidrosis[13] and after botulinum neurotoxin type B treatment of primary craniofacial hyperhidrosis.[72] More rarely, DLQI assessment was also used in patients subjected to surgery[63,73,74] or treatment with oral anticholinergics.[10,14] In 51 patients the median DLQI score decreased from 12 before suction curettage to 4 at 9 months after surgery.[73] Improvement of the score was noted in almost two-thirds of patients. In 339 subjects treated with oral methantheline bromide or placebo, the mean DLQI score decreased from 16.4 at baseline to 9.7 after 4 weeks in the verum group, compared with 17 to 12.2 in the placebo group.[10]

A comparative literature analysis revealed that QoL impairment associated with PFH often equaled or exceeded that of severe dermatologic diseases such as atopic dermatitis, contact dermatitis, and psoriasis.[3]

Skindex

Skindex is another validated, self-administered instrument for measurement of the effects of skin disease on patients' QoL.[75] The questionnaire has 61 items on 8 scales, namely cognitive effects, social effects, depression, fear, embarrassment, anger, physical discomfort, and physical limitations. Item responses are standardized from 0 (no effect) to 100 (maximal effect). Skindex has been applied once to patients with PFH.[76] The mean score averaged 24.4 with slightly higher values in patients with axillary conditions than palmar conditions (25.1 and 23.7, respectively), reflecting considerable QoL impairment.

GENERAL ASSESSMENT OF QoL

Short Form Health Survey (36 Item and 12 Item)

The 36-item Short Form Health Survey (SF-36) and an abbreviated variant of it, the 12-item Short Form Health Survey (SF-12), are valid and reliable patient-reported tools widely used for evaluation of the health-related QoL of an individual.[77] The

SF-36 consists of multiple-choice questions on 8 health domains (vitality, physical functioning, bodily pain, general health perceptions, physical role functioning, emotional role functioning, social role functioning, mental health). Answers are transformed into scales and 2 main summaries, the Physical Component Summary (PCS) score and the Mental Component Summary (MCS) score. These norm-based scores range from 0 to 100 points with 50 points being the average Unites States score and with 10 points representing 1 standard deviation. The lower the score, the higher the disability.

Sayeed and colleagues[78] were the first to use the SF-36 tool to assess the QoL status before and after ETS in a small number of patients with upper limb hyperhidrosis. Since then, the SF-36 has emerged as the favored instrument in the assessment of general QoL in patients with PFH. Pretreatment SF-36 scores often showed lower than normal mental and physical health dimensions that improved after ETS surgery.[29,74,79–84] Strongest effects were mostly seen in social functioning and other scores of mental fitness. One study comparing SF-36 results in operated patients with those in healthy controls revealed no significant differences.[74] Only bodily pain and physical role domains decreased 1 month after ETS, because of the effects of the recent operation, but recovered shortly thereafter.[74,80] In a German study on 178 patients with PFH the SF-36 values for vitality, social fitness, and psychological fitness showed a tendency to smaller values in patients with postoperative compensatory sweating, but did not reach statistical relevance.[82] Lee and colleagues[31] observed increases in SF-36 scores in patients with PFH treated with oral glycopyrrolate.

In our study on 345 subjects with PFH the compressed SF-12 version of the questionnaire was used.[3] Compared with healthy controls, patients with hyperhidrosis had lower mean scores indicating poorer health status on both the MCS score (44.4 vs 50.8) and the PCS score (52.9 vs 54.9). In 240 patients with PAH treated with BoNT/A, the mean PCS score significantly improved from baseline by 0.9 points and the mean MCS score by 1.7 points.[40] Measures of SF-12 in 51 patients with various types of PFH showed significant mean increases 1 month after ETS in both PCS score (51.45 before ETS vs 54.25 after ETS) and MCS score (49.08 before ETS vs 53.88 after ETS).[84]

Other Instruments

On rare occasions, other instruments than the SF-36/SF-12 were used to rate the QoL impairment in patients with hyperhidrosis. Cinà and Clase[85] administered the Illness Intrusiveness Ratings Scale (IIRS) by electronic mail to patients with PFH, and 68 people responded on 2 occasions 4 weeks apart. The IIRS measures the extent to which a disease, its treatment, or both interfere with activities across 13 life domains considered important to QoL on a 7-point Likert scale. Scores were lower in participants who previously had surgery for hyperhidrosis, compared with those who had not, and improved dramatically in 4 patients who underwent surgery during the course of the study.[85]

The Nottingham Health Profile (NHP) contains 38 items dealing with the 6 health domains of pain, energy, sleep, mobility, emotional reaction, and social isolation. Ambrogi and colleagues[29] used it in patients with PPH for comparison of ETS and BoNT/A injections at different time points after treatment and noted the same trend for both the NHP and the simultaneously applied SF-36.

The Everyday Life Questionnaire (EDLQ) was used in 30 patients with PPH before and 6 months after ETS.[86] The instrument comprises 42 questions about physical, emotional, social, and functional components of QoL as well as joy of life and patient satisfaction with medical care. Poor preoperative QoL was a significant predictor of postoperative improvement across all dimensions covered by the questionnaire.

ASSESSMENT OF SPECIAL IMPAIRMENTS

Anxiety, depression, and social phobia profiles were repeatedly assessed in patients with hyperhidrosis.[31,49,76,84,87] Weber and colleagues[76] applied the State-Trait Anxiety Inventory G Form X2 (STAI), the Social Phobia Scale (SPS), the Symptom Checklist 90R (SCL-90-R) of Derogatis, and the Hospital Anxiety and Depression Scale (HADS-D) to 70 patients with different types of PFH. Only the mean value for SPS was slightly greater than the normal range, but values of all instruments significantly changed in the direction of normalization after BoNT/A treatment. Likewise, Ramos and colleagues[49] found that general state and trait anxiety levels in 158 patients with PPH and other types of PFH before ETS surgery were similar to those of the general population. However, when applying a self-designed anxiety-specific questionnaire inquiring typical incapacitating situations nearly half of the patients affirmed 9 or more of 14 questions. Items related to the hands and their use, to public situations, and relations with people of the opposite sex and strangers scored the highest. The investigators concluded that patients with PFH have a high degree of

anxiety perceived as debilitating in daily life, which the STAI was unable to measure. In another 51 patients with PFH STAI rates bordered clinical significance, whereas depressive symptoms, as assessed by the Center for Epidemiologic Studies Depression Scale (CES-D), were not altered.[84] However, rates of both anxiety and depression were decreased 1 month after ETS. Beck Depression Inventory (BDI), Beck Anxiety Inventory (BAI), and the Autonomic Nervous System (ANS) scale were used in 2 studies on the effect of glycopyrrolate.[31,87] Only declines in the BAI score were noted in patients with PFH,[31] whereas decreases in both BAI score and BDI score occurred in patients with compensatory hyperhidrosis.[87]

A group of 50 patients with PFH recently scored significantly higher in 2 of 3 subscales of the Toronto Alexithymia Scale-20, a 20-item tool that measures features of alexithymia, denoting an insufficiency in identification and expression of emotions.[88] Values greater than normal were found in 45.6% of patients compared with 18.2% of control participants. Alexithymic individuals are less able to cope with stress and to communicate their feelings effectively, they tend to develop fewer close relationships, and have lesser social skills.[88] The same Turkish group of psychiatrists found significant differences in several scores of the Temperament and Character Inventory (TCI) between patients with PFH and controls.[89] The results indicate that patients with PFH might have less energy; might have a tendency to tiredness; and might be less able to tolerate, cope with, and recover from stress.

SUMMARY

Hyperhidrosis in general, and PFH in particular as the most important entity within its scope, are common conditions that are often detrimental to patients' social, psychological, professional, and physical well-being. Beyond objective measurement of increased sweat production and demarcation of affected sites and areas, the real impact of the disease can only be recognized by assessment of the reduction in QoL. Significant progress in treatment of PFH has been achieved by the introduction of botulinum toxin injections and the technical improvement of ETS, which is reflected in the intense QoL research since about the turn of the century. In the meanwhile, survey of QoL has become the most important outcome measure in patients with hyperhidrosis. The simplest tool for its rapid appraisal in daily routine is the HDSS. For more exact evaluation of QoL in clinical studies the use of a dermatology-specific instrument, such as the DLQI, and of a disease-specific instrument, such as the HHIQ, are appropriate. The most suitable tool with a general section addressing limitations in social, psychological, private, and professional life as well as special sections identifying site-related problems probably has still to be developed. Use of a uniform questionnaire shared by dermatologists, thoracic surgeons, and other treating physicians is desirable, with a summed total score facilitating comparison. Additional use of instruments assessing general QoL issues and allowing the detection of typical disadvantages, side effects, and complications of different treatments before and during/after intervention also seems to be important. Otherwise, drawbacks such as expenditure of time in tap water iontophoresis, xerostomia caused by oral anticholinergics, and compensatory hyperhidrosis after ETS surgery may be missed.

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