Health-related Quality of Life in Dermatology – Focus on Self-reported Skin Morbidities and Non-melanoma Skin Cancer

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Gabrielle R Vinding defended her PhD thesis on "Health-related Quality of Life in Dermatology – Focus on Self-reported Skin Morbidities and Non-melanoma Skin Cancer " on 15th May 2014 at Roskilde Hospital, University of Copenhagen. Her main supervisor was Professor Gregor Jemec and her co-supervisors were Associate Professor Anne Braae Olesen and Sandra Erntoft. The Opponents were Professor Tove Agner, University of Copenhagen, Professor Andrew Finlay, University of Cardiff and Associate Professor Mette Deluran, University of Aarhus.

Dermatological diseases are common and non-melanoma skin cancer (NMSC) has a particularly high and growing incidence. In the last 20 years, patient-reported outcome measures such as Health-Related Quality of Life (HRQoL) are increasingly used and HRQoL is becoming an important factor in the assessment of treatment outcomes. To measure HRQoL in dermatology, generic, dermatology-specific and disease-specific instruments can be used.

The aim of this thesis was to investigate, in a population-based sample, HRQoL in 5 self-reported skin morbidities: hidradenitis suppurativa (HS), psoriasis, pimples, hand rash and atopic eczema. An additional aim was to create and test psychometric properties and establish clinical interpretation of the Skin Cancer Quality of Life (SCQoL), a self-administered questionnaire measuring HRQoL in patients with non-melanoma skin cancer (NMSC) affecting any area and undergoing any therapy.

To evaluate HRQoL, a nested case-control study with 180 cases and 259 controls from a sample of 15,177 Danes was conducted using Skindex-29, DLQI and EQ-5D. Secondly, a NMSC-specific questionnaire (SCQoL) was developed in a stepwise process, testing psychometric characteristics (content and face validity, scale structure, reliability and known-groups, concurrent and convergent validity). Rasch analyses were performed on the final questionnaire. Thirdly, data from 101 patients surgically treated for NMSC were investigated using receiver operating characteristic (ROC) analyses to propose clinically meaningful cut-off scores for SCQoL and, after 3 months of follow-up, to test responsiveness.

Individuals with a self-reported skin morbidity were found to have lower HRQoL; cases had a lower score in EQ-5D and higher scores in both DLQI, and the 3 domains of Skindex-29 and the total score. After adjusting for age and sex, differences between cases and controls in DLQI and Skindex-29 were significant (p <0.001). The mean differences in the total score of

Fig. 1. Gabrielle R. Vinding defended her thesis on May 15, 2014 at Roskilde Hospital, Denmark.

Skindex-29 were similar for all 5 groups (e.g., for psoriasis a mean of 19.8 [95% CI 17.2–22.4]). The results of comparing the 5 disease categories indicated that individuals with different skin morbidities were impaired in different domains. Regarding HRQoL for NMSC, a 9-item questionnaire (SCQoL) was developed. Rasch analysis confirmed the scale and the consistency of 3 domains covering function, emotions and control and a single global item. Possible total score range is 0–27, with higher scores indicating greater impairment in HRQoL. The SCQoL is reliable as shown by internal consistency and valid as tested by concurrent, convergent and known-group validity. Responsiveness was established for the emotions domains and the global item. The following bands were established: a score of 0–3 corresponds to no impairment; 4-6 corresponds to mild impairment, 7–10 to moderate impairment and 11–27 to severe impairment of HRQoL.

In conclusion, exploring dermatological HRQoL has shown that people with self-reported skin morbidity have lower HRQoL than does the general population. HRQoL impairment

in studies among hospital-based cases is greater, but the cumulative effect of less impairment over the course of life may still represent a significant burden for the individuals affected and for society when the high prevalence of skin diseases is considered. The new NMSC-specific HRQoL instrument SCQoL and attendant clinical cut-off scores can help clinicians in decision making, monitoring clinical improvement or deterioration and classifying patients. Growing interest in dermatological HRQoL is evident in clinical practice, clinical research and health policy. However, above all, using HRQoL strengthens patient empowerment.

Literature

1. Vinding GR, Knudsen KM, Ellervik C, Olesen AB, Jemec GBE. Self-reported skin morbidities and health-related quality of life: a population-based nested case-control study. Dermatology 2014; 228: 261–268.
2. Vinding GR, Christensen KB, Esmann S, Olesen AB, Jemec GBE. Quality of life in non-melanoma skin cancer – the skin cancer quality of life (SCQOL) questionnaire. Dermatol Surg 2013; 39: 1784–1793.
3. Vinding GR, Esmann S, Olesen AB, Hansen LB, Christensen KB, Jemec GBE. Interpretation of The Skin Cancer Quality of Life score – a validated quality of life questionnaire for non-melanoma skin cancer. Dermatology 2014; 229: 123–129.