

M.Kinan Hayani

Dr. med.

Dermatologie

Doktormutter: Prof. Dr.med. Elke Weißhaar

**Die Klinik und Versorgung des chronischen, nierenerkrankungs-assoziierten Pruritus bei hämodialysierten Patienten: Ergebnisse aus einer repräsentativen Querschnittstudie German Epidemiological Hemodialysis Itch Study (GEHIS)**

**Clinical Aspects and Provision of Care in Chronic Kidney Disease associated Pruritus in Hemodialysis Patients: Results of A Representative Cross-sectional Study (German Epidemiological Hemodialysis Itch Study) (GEHIS)**

The German Epidemiological Hemodialysis Itch Study (GEHIS) is the first representative cross-sectional study using a precise definition of chronic itch (CI) and obtaining different prevalence estimates in hemodialysis (HD) patients with CI. GEHIS has shown that more than one third of hemodialysis patients suffer from CI. As part of GEHIS, 216 patients with current CI were offered a dermatological examination, of whom 177 were investigated. This doctorate thesis demonstrates clinical characteristics, dermatological findings, measures of quality of life and for the first time, a classification of chronic itch according to the most recent classification, the IFSI (International Forum for the Study of Itch) clinical classification. It could be shown that 43.5 % (n=77) of the patients examined had CI on normal looking, non-diseased skin. 73.9% (n=67) had secondary scratch lesions (IFSI III), and 18.6% (n=33) had CI on primarily diseased skin (IFSI I). This demonstrates that chronic itch is attributed to specific dermatoses in nearly every 5th patient. Severity of CI and itch-related quality of life (ItchyQoL) showed a significant association only with IFSI III. 89.8% (n=159) had xerosis cutis according to the dermatological examination. Health-related quality of life (HRQOL), sleeping quality and HADS scores (measuring anxiety and depression) were significantly impaired in HD patients

suffering from chronic itch when compared to those without CI, however, there was no significant difference according to the IFSI clinical classification of itch. Moreover, this study demonstrates that the provision of care in these patients is clearly lacking. Only a minority of them had ever received a treatment for itch. Those who ever received any treatment for CI had significantly more severe CI and were mostly classified as IFSI III. Another important finding of this medical thesis is the fact that HD patients who received any type of loop diuretics (furosemine, torasemide), compared to those who did not, had significantly less odds to develop CI. It could be shown that the use of loop diuretics is associated with a significantly smaller risk of suffering from CI. The underlying mechanisms for this phenomenon are still unclear, however several explanations for these findings are discussed; one important speculation concerns a direct anti-inflammatory effect of loop diuretics, which could attenuate CI. In summary, this study shows new and important findings on hemodialysis patients suffering from chronic itch. As they are derived from a representative cross-sectional study, they may impact future research. The fact that almost half of the HD patients with CI present with normal looking skin may explain why CI in HD patients is not sufficiently treated and should encourage a better collaboration between nephrologists and dermatologists in the future. The results obtained clearly demonstrate that it is most likely that a multifactorial origin may explain CI in HD patients. Future research should focus on the role of loop diuretics in CI, a finding that has not been researched in the past. The research should comprise studies on a clinical as well as on a molecular level.