SYMPTOM BURDEN ACCORDING TO DIALYSIS DAY OF THE WEEK IN THREE TIMES A WEEK HEMODIALYSIS PATIENTS

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INTRODUCTION AND AIMS: Hemodialysis (HD) patients experience significant symptom burden and effects on health-related quality of life. Physical and mental symptoms are a barrier to complex behaviour change such as self care. Previous studies have shown increases in end points such as volume status, hyperkalaemia, hospitalisation and mortality immediately after two day break in 3 times a week in-centre HD, however the relationship between HD day and symptom burden has not been formally quantified.

METHODS: Patients participating in quality improvement programme to teach patients to undertake dialysis related tasks (SHAREHD) completed the Think Kidneys Your Health Survey (YHS) (including POS-8 Renal and EQ5D-5L) at baseline, 6 and 12 months. All YHS completed by three times a week in-centre dialysis patients were identified. Logistic regression (LR) was used to predict the presence of each of 17 symptoms (mild to overwhelming compared to none) adjusting for age, sex and time on HD. HD day of the week was treated as continuous variable which increased with each HD session from two day break (i.e. 1,2,3), and separately HD compared non-HD days categorically. Elements of the EQSD were also evaluated.

RESULTS: From a cohort of 586 patients participating in SHAREHD, 1157 YHS completed by 445 patients that could be assigned a HD day (370 on Mon/Tue, 403 on Wed/Thu, 191 on Fri/Sat, 193 on non-HD days) were analysed. Across the week, the prevalence of symptoms were high: pain (64.8%), nausea (36.9%), poor mobility (69.2%), breathlessness (56.0%), poor appetite (66.5%), anxiety (48.0%) and depression (46.7%). EQSD quality of life (QOL) was 0.70 (95% CI 0.68-0.71), comparable to other HD cohorts. Pain and nausea significantly improved with increasing time from the 2 day break. Prevalence of pain was 66.9%, 64.5% and 55.3% for the 1st, 2nd and 3rd HD day respectively (LR: 23% improvement per HD day, 95% CI 7.6-36.6%, p=0.005). Prevalence of nausea was 39.9%, 36.7% and 30.3% respectively (20% per HD day, 95%CI 3.2-33.6%, LR p=0.032). No statistically significant relationship was identified for the remaining symptoms and EQSD QOL was similar across the HD days (0.71, 0.69, 0.73, p=0.284). Patients who responded on non-HD days had higher symptom burden: pain (70.8% vs 63.6%, LR p=0.022), breathlessness (64.3% vs 54.4%, LR p=0.010), mobility (79.0% vs 69.2%, LR p=0.004), sleeping (72.2% vs 63.5%, LR p=0.02). Weakness, anxiety and constipation were borderline (LR p<0.15) and EQSD was non-significantly reduced (0.66 vs 0.70, p=0.64).

CONCLUSIONS: Symptom burden is high in in-centre HD patients, suggesting that measurement of these as clinical outcomes is relevant. Patients who responded on non-HD days, possibly at home, reported greater burden of some symptoms and non-significantly lower EQSD QOL suggesting issues surrounding environment and symptom perception. Pain and nausea lessen as time from 2 day break increases. Researchers should ensure evaluation of symptoms and QOL are conducted in a standardised location and specific HD days to minimise the risk of bias.