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P266 -Auditing the inter-dialytic weight gain of haemodialysis patients over a three year period from 2016 to 2018.

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Background

Inter-dialytic weight gain (IDWG) is defined as the fluid gain between 2 dialysis sessions. The international DOPPS study showed that an IDWG of >4% increases the risk of hospitalisation, and an IDWG of >5.7% increases the risk of cardiac mortality. The prevalence of >4% IDWG in the study was 33.3% (1). The European Best Practice Guideline recommends IDWG should not exceed 4-4.5% of dry weight (2). UK Renal Registry Report presented the annual mortality for haemodialysis (HD) patients was 16.1% and the 2-year mortality was 30.1% (3).

Aims

1) To calculate IDWG in adult HD patients over 3 years and audit against European Best Practice Guideline. 2) To assess impact of staff training on IDWG. 3) To review mortality rates of patients who had excess IDWG and compare to Renal Registry reports.

Methods

Established maintenance HD patients were included for audits in 2016 (N=296), 2017 (N=303) and 2018 (N=287). Data were collected from electronic patient records. The data were anonymised and IDWG was calculated once for each cohort. Mortality data were collected for those patients identified as having IDWG in excess of 4%. In addition, the renal dietitians provided both training, and a 4% weight gain calculator to HD unit staff between 2017 and 2018. A comparison was made between 2016 and 2018 in IDWG after a short gap (1-day HD interval), and between 2017 and 2018 after a long gap (2-day HD interval).

Results

Table 1 shows the characteristics of patients, the presence of >4% IDWG and their outcomes. More patients gained IDWG >4% after a long gap compared to IDWG after a short gap. The prevalence of >4% IDWG was consistently below that reported in DOPPS (1). The prevalence of >4% IDWG after a long gap increased from 10.7% in 2017 to 16.7% in 2018 ($p<0.05$). Conversely, the prevalence of IDWG >4% following short gap reduced from 3.7% in 2016 to 1.7% in 2018 ($p<0.01$).

The mortality rate of patients who had >4% IDWG after a long gap (n=35) was 14% at 12 months, consistent with typical mortality rates reported by the UK Renal Registry, and 45.5% of the patients with IDWG of >4% after a short gap had died at 2 years.

Conclusion

Excess IDWG, particularly after a long gap, remains an on-going clinical problem. Targeted advice and staff training, including the adoption of a 4% weight calculator did not realise the desired reduction in excess IDWG.