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P151 -Association of cancer history with mortality in end-stage renal disease patients on dialysis

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Background and aims

Cancer as a comorbidity in end-stage renal disease (ESRD) patients is important to consider while planning for renal replacement therapy (RRT) options due to its associated increased mortality. This study aims to investigate the natural history and association of cancer with all-cause mortality in an ESRD population receiving dialysis.

Method

The study was conducted on 1271 ESRD patients receiving dialysis between January 2012 and December 2017. A comparative analysis was carried out between 119 patients with and 1152 without cancer history entry into this study (baseline). A 1:2 (cancer: no cancer) propensity-matched sample of 357 patients was also used for analysis. Cox-regression analysis was used to study the strength of the association between cancer and all-cause mortality. Kaplan-Meier analysis was used to demonstrate the difference in cumulative survival between the groups. A competing risk analysis was also carried out to calculate the probability of competing events (death, transplant and incident cancer).

Results

At baseline, 10.1% of the cohort had a history of cancer (current and past) with the annual incident rate being 1.3%. Urological cancers were the leading site of cancer. The median age of our cohort was 63 years with a predominance of males (63%) and Caucasians (79%). The majority (69%) of the cohort were receiving haemodialysis. 47% had a history of diabetes with 88% being hypertensive. During a median follow-up of 28 months, the percentage of deaths observed was similar between the groups in the matched sample (cancer 49.6 versus 52.1%, p-Value-0.77). In a univariable Cox-regression model, the association between cancer and all-cause mortality was close to significance (HR:1.28; 95% CI: 0.97-1.67; p=0.07). The KM estimates showed similar observations in the cumulative survival between the groups (log-rank, p-Value-0.075). In competing risk analysis, the cumulative probability of death at five years was higher in cancer group, though not significantly different (cancer group 64% vs no cancer group 51%, p-Value-0.16) (figure)

Conclusions

The prevalence and incidence of cancer were higher in ESRD patients receiving dialysis. In our multimorbid dialysis population, baseline cancer history did not prove to be an independent risk factor for all-cause mortality.