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## P275 -Acetate-free biofiltration: an underappreciated treatment option in managing haemodialysis patients.

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**Introduction:** At this centre, acetate-free biofiltration (AFB) has been commonly used alongside haemodiafiltration (HDF) in the management of patients on haemodialysis for over thirty years. This is an unusual setting in the UK dialysis population and as such, represents a unique opportunity to compare the effects of AFB and HDF.

**Background:** Theoretically, AFB is a more biocompatible dialysis technique than HDF, and avoids the deleterious effects of acetate on the cardiovascular system. Anecdotally, AFB is tolerated more successfully by frail patients. This has been supported by some studies which have shown that dialysis symptoms and intradialytic haemodynamic stability are improved in AFB compared to HDF. However, there is little contemporaneous research in the literature.

**Methods:** This was a cross sectional study, where data was gathered from electronic patient records at a single time point in November 2018. The study was limited to patients undergoing haemodialysis in-centre or in satellite units. Statistical analysis was carried out using the IBM SPSS Statistics software package.

**Results:** The total number of patients studied was 201: 57 undergoing AFB (28%) and 144 undergoing HDF (72%). The mean age was 67.5 years (SD 14.5 years) and the population was 67% male and 93% white. The median time on dialysis was 63.1 months (AFB) and 69.5 months (HDF). Dialysis treatment times were similar: AFB 11.5 hours/week and HDF 11.9 hours/week, with most patients receiving thrice weekly dialysis. The most common indication for AFB was cardiovascular instability (32%) and intolerance of other haemodialysis modalities (25%). Metabolic parameters were similar between the two groups: serum albumin, calcium, phosphate, haemoglobin and ferritin. In addition, the median systolic and diastolic blood pressure and erythropoietin doses were similar.

There were also significant differences between the two populations: mean serum bicarbonate levels (AFB 22.9mmol/l and HDF 25.4 mmol/l,  $p<0.05$ ), median daily urine volumes (AFB 100ml and HDF 500ml,  $p<0.05$ ), urea reduction ratios (AFB 74% and HDF 76%,  $p<0.05$ ), and median dry weight (AFB 70.4kg and HDF 75.7kg,  $p<0.05$ ).

**Discussion:** AFB has been successfully utilised in this centre for many years and there are a significant number of patients who are dependent on this treatment. Interestingly, blood pressure readings were similar between the two groups, which differs from the published literature.

Most metabolic parameters were equivalent between the AFB and HDF populations. However, there were significant differences with bicarbonate level, urine volumes and urea reduction ratios. Some of these differences may be attributable to variation in comorbidities, health and physical status, and dialysis vintage and medications.

**Conclusions:** Although use of HDF is widespread, this study demonstrates that AFB, in this centre, is a successful alternative treatment for those patients who are unable to tolerate HDF. AFB remains a viable treatment option in managing unstable haemodialysis patients in the era of HDF.