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141**HIGH PROTEIN MEALS DURING HEMODIALYSIS TREATMENT TO INCREASE SERUM ALBUMIN WHILE CONTROLLING PHOSPHORUS: PRELIMINARY RESULTS FROM THE FREDI STUDY**

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The “Fosrenol for Enhancing Dietary Protein Intake in Hypoalbuminemic Dialysis Patients” (FrEDI) pilot/feasibility randomized controlled trial (ClinicalTrials.gov # NCT0111694) was designed and conducted to examine the hypothesis that provision of food with high protein content including during hemodialysis (HD) treatment combined with a potent phosphorus binder such as lanthanum carbonate (Fosrenol™) to simultaneously control phosphorus burden of high protein diet will improve clinical outcomes. The FREDI study recruited 106 hypoalbuminemic (<4.0 mg/dL) HD patients from several dialysis clinics in Southern California. Upon inclusion/exclusion criteria qualification and 1:1 randomization, the “intervention” group received 8 weeks of high protein food in the form of cold meal boxes (51 g protein, 850 Cal, phosphorus to protein ratio <10 mg/gm) during each HD treatment along with 0.5 to 1.5 g Fosrenol (titrated as needed) plus dietary counseling to maintain a high dietary protein intake at home. The “control” group received salad meal boxes with low calorie (<50 Cal) and very low protein (<1 g.) during each HD treatment and continued non-Fosrenol binders as needed. The main outcome measure was combined rise in serum albumin of >0.2 g/dL while maintaining in-target phosphorus 3.5-<5.5 mg/dL by the end of the intervention period and according to intention-to-treat (ITT) principle. In the ITT analyses combined rise in albumin while maintaining phosphorus in the target range range was achieved in 25.5% and 9.8% of the 51 intervention and 55 control subjects, respectively (χ^2 p=0.036). No serious adverse event were observed, and patients reported satisfaction with high protein meals during HD. We conclude that in HD patients with albumin <4.0 g/dL, providing high protein meals combined with Fosrenol™ during HD treatment in the dialysis clinic is safe and may increase serum albumin levels while controlling serum phosphorus.