Peritoneal dialysis in diabetics

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With high prevalence of diabetes among adults in general population, the percentage of incident diabetic patients in ESRD is growing rapidly. In most countries, it is now higher than 40% including US, Japan, Korea and Taiwan. There are several advantages and disadvantages of peritoneal dialysis (PD) over hemodialysis. Intraperitoneal (IP) glucose in PD may have negative systemic and local impacts. Negative system impacts are mostly associated with hyperglycemia and negative local impacts may ultimately result in peritoneal membrane failure. Depending on PD prescription, the estimated calorie of absorbed glucose in PD is variable. Approximately 300-450 Calorie is absorbed in each day. IP glucose extends period of hyperglycemia rather than oral glucose. Early cohorts before year 2000 had shown that survival on PD were generally found to be equal or better than HD, especially among non-diabetic and younger diabetic patients, whereas the survival of elderly diabetes PD patients seems to be worse. However, there was survival improvement in both dialysis modalities after year 2000. Survival improvement in PD including diabetics was more remarkable compared to that in HD. In recent cohorts, there was no survival difference in diabetic patients between two dialysis modalities. PD patients mostly enjoy a better QOL compared to HD patients. Early referral to nephrologist, planned dialysis, patient-centered intervention involving nurse may improves the outcomes. Vigilant (rather than intensive) glycemic and BP control in diabetic dialysis patients is needed, particularly in PD patients, for improving Survival. It may also need to find the diabetic patients who are expected to have good outcomes on PD.
It will be also discussed whether or not there are better alternatives than HgbA1c to estimate glycemic control and any oral drug is superior to another in diabetic PD patients.