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COMPARING MORTALITY-PREDICTABILITY OF HYPERPHOSPHATEMIA IN MAINTENANCE HEMODIALYSIS PATIENTS WITH AND WITHOUT POLYCYSTIC KIDNEY DISEASE (PKD)

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Although observational studies show consistent associations between high serum phosphorus (P) & death risk in maintenance hemodialysis (MHD) patients (pts), it is not known whether PKD-MHD pts exhibit same or different associations. We examined a 3-yr (7/01-6/04) cohort of 58,917 MHD pts including 1,562 PKD pts in DaVita clinics using Cox models adjusted for case-mix & malnutrition-inflammation complex syndrome (MICS) including serum calcium and PTH. For each pt we calculated 3-yr-averaged P values based on weekly to monthly measured P levels over 3 yrs. PKD & non-PKD pts were 58.2±13.6 & 61.5±15.4 years old (mean±SD) & included 49% & 46% women, & 8% & 47% diabetics, respectively. In fully adjusted models across 4 P increments (<3.5, 3.5-<5.5 [ref], 5.5-<7.0 & >=7.0 mg/dL, P in 3.5 to 5.5 mg/dL range was associated with greatest survival in both PKD & non-PCKD pts. Incremental association between hyper-P >5.5 mg/dL & increased death risk were similar in both groups (see Figure):

Hence, associations of 3-yr time-averaged serum P with death risk in PKD pts are similar to their non-PKD counterparts.