Long Term Clinical Evaluation with PMMA(BK)

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TEN YEARS FOLLOW UP MULTICENTRE CLINICAL TRIAL OF PMMA MEMBRANE DIALYSIS

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To identify the potential benefits of PMMA dialysis membrane in the prevention of dialysis -related amyloidosis (DRA), we performed a multicentre prospective study since 1988. In Group #1 (n=10) who had been treated exclusively with PMMA membrane over 10 years, mean+/-SD pre-HD serum beta2M slightly increased from 21.4+/-9.5mg/L to 27.4+/-5.4mg/L, and none showed CTS or joint pain throughout the 10 years. In Group #2 (n=30) who had been initiated on dialysis using conventional cellulosic membranes, but later switched to PMMA, the average serum beta2M decreased from 39.3+/-11.7mg/L prior to the switch to 26.4+/-4.8mg/L after the switch to PMMA; [these levels remained low while the patients were maintained on PMMA.] In addition, we performed a retrospective study to compare the incidence of CTS and bone cysts in two groups of patients. In one group (n=102), patients were dialyzed with PMMA for approximately 90% of the time and the incidence of CTS was 1.6%, and bone cysts were found in 6.9% of patients. In another group (n=80) dialyzed with conventional cellulosic membranes for more than 80% of the time, the incidence of CTS was 40% and radiolucent bone cysts 51.3%. We conclude that HD using PMMA membranes results in lower beta2M level and results in a decrease or postponement of complications of DRA.

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