

## Study of intradialytic hypertension at a tertiary care hospital

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**Introduction:** Hypertension is perhaps one of the most common problems of patients with end stage renal disease (ESRD). Hypertension is highly prevalent ESRD in patients on maintenance hemodialysis (HD). Intradialytic hypertension (IDH) is one such complication responsible for increased morbidity and mortality in chronic kidney disease (CKD) patients undergoing hemodialysis. In India, there is limited data available in the literature for the incidence of IDH in CKD patients on hemodialysis.

**Aims & objective:** To study the prevalence of Intradialytic Hypertension in patient undergoing regular hemodialysis and factors responsible for Intradialytic Hypertension.

**Methods:** The study was a randomized prospective single center study. It included all the patients of chronic kidney disease (CKD) undergoing maintenance hemodialysis 2 or 3 times a week. Patients of Acute Kidney Injury will be excluded from study. Serial Blood pressure (BP) recordings were taken on monitor at the beginning of hemodialysis session, at the end of hemodialysis session and at 1 hour during the session; for 2 hemodialysis sessions. Patient was defined as having Intradialytic Hypertension (IDH) if there was; > 10mm Hg systolic BP rise on HD session, in more than 2 HD. The data obtained was studied based on 13 parameters and chi square test was applied to the attributes to test their significance at 1 degree of freedom and at 5% level of significance. (p value < 0.005 statistically significant).

**Results :** During this study it was found that mean age of all subjects was  $42.26 \pm 14.69$  years. 95(95%) had history of hypertension, 28(28%) had history of diabetes mellitus, and 12(12%) had history of ischemic heart disease. 31(31%) patients were found to have intradialytic hypertension (IDH). 96(96%) subjects were on calcium channel blockers, 70 (70%) were on beta blockers, and 44 (44%) were on alpha blockers, and 10 (10%) on central sympatholytic. Regression analysis was performed to find out independent risk factors for IDH. It was found that Pre-HD SBP was an independent risk factor for IDH after adjusting for gender, diabetes mellitus, HD vintage, cholesterol, IDWG, frequency of HD and types of anti-hypertensive drugs (CCB,  $\alpha$  blocker,  $\beta$  blocker, CS). Interdialytic weight gain and cholesterol are modifiable risk factors with appropriate measures, so these observations can potentially guide us to prevent in dialysis patients.

**CONCLUSION:** Interdialytic weight gain and cholesterol are modifiable risk factors. Pre-HD SBP was independent risk factor for IDH. Patients with overall higher BP burden likely to develop intradialytic hypertension (IDH).

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