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**INDO AMERICAN JOURNAL OF
PHARMACEUTICAL SCIENCES**<http://doi.org/10.5281/zenodo.3585316>Available online at: <http://www.iajps.com>**Research Article****ANALYSIS OF INTRA-DIALYTIC BLOOD PRESSURE
ABNORMALITIES IN HYPERTENSION PATIENTS****Muhammad Faisal¹, Ali Mumtaz Mian², Muhammad Naqash Khan³**¹Iqra Medical Complex, Lahore²District Headquarter Hospital, Nankana Sahib³Dera Ghazi Khan Teaching Hospital**Abstract:**

High blood pressure is a noteworthy hazard factor for various genuine health conditions, including cardiovascular ailment, cerebrovascular malady, and constant kidney illness. The main aim of the study is to find the intradialytic blood pressure abnormalities in Pakistan. This cross sectional study was conducted at Iqra Medical complex, Lahore during January to August 2019. Adult patients who underwent hemodialysis treatments for a minimum of 3 mo were eligible to enter the study. All participants had at least three symptomatic episodes of intradialytic hypotension in the 60 d preceding enrollment. All participants provided written informed consent. The study was approved by the Ethical committee of hospital. Our result shows that there is a significance decrease in BP of dialytic patients. The management of intradialytic hypertension warrants consideration of both the short term and long term consequences of intradialytic hypertension. It is concluded that there are not much studies related to intradialytic blood pressure abnormalities in Pakistan so there is a need of more research in this area. Despite the fact that Intradialytic hypertension is now recognized as a recurrent and persistent phenomenon in a subset of hemodialysis patients.

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INTRODUCTION:

High blood pressure is a significant public health problem, with a worldwide prevalence of 40.8% and a control rate of 32.3. High blood pressure is a noteworthy hazard factor for various genuine health conditions, including cardiovascular ailment, cerebrovascular malady, and constant kidney illness [1]. Worldwide, 9.4 million passing are credited to difficulties from high blood pressure, including 45% of all passing because of coronary vein illness and 51% of all passing because of stroke. These relations are steady in the two people, in youthful, moderately aged, and more seasoned subjects, among different racial and ethnic gatherings, and inside and between nations. In spite of the fact that there is a continuum of cardiovascular hazard crosswise over levels of circulatory strain, the characterization of grown-ups as indicated by pulse gives a system to differentiating levels of hazard related with different circulatory strain classes and for characterizing treatment edges and helpful objectives.

Blood pressure (BP) measurement is a fundamental part of hemodialysis (HD) administration with measurements taken before and after HD and at frequent intervals during treatments. It is well-recognized that these peridialytic and intradialytic BP measurements are poorly reflective of interdialytic BP behavior and overall cardiovascular disease burden. However, such BP measurements are essential for monitoring patient safety during dialysis [3]. Peridialytic BPs and adverse clinical outcomes have a well-described “U”-shaped association, but no prospective studies have established optimal intervention thresholds on either end of the BP spectrum. Overt intradialytic BP abnormalities such as hypotension in a pale, diaphoretic patient or hypertension in a patient with headache and vision change are impossible to ignore. Such drastic presentations spark immediate intervention, and elegant studies demonstrating harm are not needed [4]. While these extreme BP events occur more often than desired, they are relatively infrequent in today’s era of bicarbonate-based dialysate and volumetric ultrafiltration (UF). Elevated blood pressure (BP) is a

causal risk factor for cardiovascular disease (CVD) [5]. In addition, randomized clinical trials among people with high blood pressure have illustrated, in total, a decrease in CVD occasions by 20%, coronary illness (CHD) by 17%, stroke by 27%, and heart disappointment by 28% for each 10 mm Hg systolic BP (SBP) bringing down with medicinal treatment. In this manner, counteractive action, location, treatment, and control of lifted BP, and its clinical connect high blood pressure, is a critical general health need and an essential focus for CVD aversion [6].

Objectives of the study

The main aim of the study is to find the intradialytic blood pressure abnormalities in hypertension patients in Pakistan.

METHODOLOGY OF THE STUDY:

This cross sectional study was conducted at Iqra Medical complex, Lahore during January to August 2019. Adult patients who underwent hemodialysis treatments for a minimum of 3 mo were eligible to enter the study. All participants had at least three symptomatic episodes of intradialytic hypotension in the 60 d preceding enrollment. All participants provided written informed consent. The study was approved by the Ethical committee of hospital.

Statistical analysis

The collected data were analyzed using SPSS software (version 17). The results are presented as a mean with 95% confidence interval limits or standard deviations. The significant value for $P < .05$ was accepted as statistically significant.

RESULTS:

Our result shows that there is a significance decrease in BP of dialytic patients. The management of intradialytic hypertension warrants consideration of both the short term and long term consequences of intradialytic hypertension. One case control study showed that ambulatory BP was higher in intradialytic hypertension patients compared to other hypertensive HD patients whose BP decreased during dialysis (Table 01).

Table 01: analysis of patients with intradialytic hypertension

Pre HD SBP (mmHg)	Post HD SBP (mmHg)	Low SBP (mmHg)	Pre HD Weight (kg)	Post HD Weight (kg)	Target Weight	Weight Gain (kg)	Dialysate Na (mg/dL)	Serum Na (mg/dL)
157	183	139	74.6	70.5	70.5	5.0	140	135
169	140	125	75.3	70.6	70.5	4.8	140	
145	163	140	75.7	70.5	70.5	5.1	140	
167	176	139	74.5	70.3	70.5	4	140	136
148	169	128	75	70.4	70.5	4.7	140	
145	155	130	75.8	70.6	70.5	5.4	140	

DISCUSSION:

The pathophysiologic mechanisms underlying intradialytic hypotension provide insight into potential management strategies. Dialysate sodium, plasma albumin and the magnitude of hydrostatic capillary force all influence plasma refill [7]. Exposure to higher dialysate serum sodium gradients increase fluid mobilization into the intravascular space. Similarly, higher plasma osmolality, associated with greater albumin levels, enhances refill. Intradialytic osmolality decline from uremic toxin removal and sodium gradient equilibration lead to slowed vascular refill over the treatment course [8]. Procedural factors such as warm dialysate, acetate buffer or eating during dialysis increase hypotension risk by decreasing peripheral resistance. Autonomic dysfunction and impaired baroreceptor sensitivity dampen the compensatory cardiac responses to these blood volume reductions. Cardiac abnormalities such as diastolic dysfunction, atrial fibrillation, left ventricular hypertrophy, and ischemic heart disease also contribute. When compensatory responses for reduced cardiac filling reach their limits, BP falls [9].

While less common than intradialytic hypotension, intradialytic hypertension is another BP phenomenon with important prognostic significance. Patient and clinical characteristics associated with intradialytic BP rise include older age, lower body weight, lower serum creatinine and albumin, and utilization of more antihypertensive medications. The prevalence of intradialytic hypertension ranges 5–15% among maintenance HD patients, depending on the definition [10].

CONCLUSION:

It is concluded that there are not much studies related to intradialytic blood pressure abnormalities in Pakistan so there is a need of more research in this area. Despite the fact that Intradialytic hypertension is now recognized as a recurrent and persistent phenomenon in a subset of hemodialysis patients.

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