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PULMONARY HYPERTENSION IN CHRONIC KIDNEY DISEASES

[1]Dr. Shahid Hussain Memon, [1]Dr. Rashid Ahmed Khan, [1]Dr. Zakir Hussain Rajpar, [2]Dr. Hamid Nawaz Ali Memon, [3]Dr. Samar Raza and [1]Dr. Aneeta Lohana

[1]Liaquat University of Medical and Health Sciences (LUMHS) Jamshoro, [2]Zulekha Hospital Dubai United Arab Emirates, [3]Liaquat University Hospital Hyderabad / Jamshoro.

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Abstract:

Objective: *To determine the pulmonary hypertension in chronic kidney diseases*

Patients And Methods: *The one year cross sectional study was conducted at tertiary care hospital. All the patients either gender who were diagnosed as chronic kidney disease were included in the study. These patients were allowed to undergo necessary investigations and treatment. PH was defined as a mean pulmonary artery pressure ≥ 25 mmHg. All the specific patients had thorough clinical history, relevant clinical examination and important investigations to explore the pulmonary hypertension while the frequency / percentages (%) and means ±SD computed for study variables.*

Results: *During one year study period total fifty patients with chronic kidney disease were explored and studied. The frequency for male and female population was 28 (56%) and 22 (44%) with mean ± SD for age of male and female individuals was 55.82±7.83 and 53.72±8.75 respectively while the mean value for pap (mmHg) was 37.72 ± 9.95. gender male 28 (56%) and female 22 (44%), diabetes mellitus 30 (60%), hypertension 32 (64%) and pulmonary hypertension 29 (58%).*

Conclusion: *We presume that PH is a noteworthy issue in ESRD patients.*

Keywords: *Pulmonary hypertension, Renal and Lung.*

Corresponding author:

Dr. Samar Raza,

Liaquat University Hospital Hyderabad / Jamshoro.

Email: zulfikar229@hotmail.com.

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INTRODUCTION:

End stage kidney disease (known as chronic kidney disease) is the major cause of mortality in developed and under developed countries.1 Pulmonary hypertension (PH) and CKD frequently coexist and earlier examinations propose that PH is related with expanded mortality in patients with CKD [1]. Moreover, the commonness of PH increments crosswise over CKD arranges in a portion reaction way, a perception that recommends a potential direct relationship [2]. Regardless of expanded acknowledgment of PH as a vital supporter of mortality among CKD patients, little is thought about the etiology of PH in patients with CKD [3]. Epidemiologic and long haul result information are missing on the effect of PH, especially among patients with beginning time CKD [4]. Potential systems for the advancement of PH in patients with CKD incorporate endothelial brokenness, expanded move through arterio-venous shunts, introduction to dialysis layers, and raised left ventricular filling pressure [5]. Most examinations looking at the connection among CKD and PH have depended on Doppler echocardiography to distinguish PH. This methodology is restricted in light of the fact that echocardiography can't dependably quantify left ventricular filling weight, which is basic to segregate pre-fine from post-slender PH.

PATIENTS AND METHODS:

The one year cross sectional study was conducted at tertiary care hospital. All the patients either gender who were diagnosed as chronic kidney disease were included in the study. These patients were allowed to undergo necessary investigations and treatment while the subjects excluded from study were known cases for pulmonary diseases, malignancy and the non cooperative patients who not interested to participate in the study. PH was defined as a mean pulmonary artery pressure ≥ 25 mmHg as measured by invasive RHC, and classified as either pre-capillary PH or post-capillary PH. Pre-capillary PH was defined as a mean pulmonary artery pressure ≥ 25 mmHg and a mean pulmonary artery wedge pressure (mPAWP) ≤ 15 mmHg and post-capillary PH was defined as a mPAP ≥ 25 mmHg and mPAWP > 15 mmHg according to consensus statement. All the specific patients had thorough clinical history, relevant clinical examination and important investigations to explore the pulmonary hypertension whereas the data was collected on proforma while analyzed in SPSS to manipulate the frequencies, percentages and mean ±SD.

RESULTS:

During one year study period total fifty patients with chronic kidney disease were explored and studied. The frequency for male and female population was 28 (56%) and 22 (44%) with mean ± SD for age of male and female individuals was 55.82±7.83 and 53.72±8.75 respectively while the mean value for PAP (mmHg) was 37.72 ± 9.95 The demographical and clinical profile of study population is presented in Table 1.

TABLE 1: THE DEMOGRAPHICAL AND CLINICAL PROFILE OF STUDY POPULATION

Parameter	Frequency (N=50)	Percentage (%)
AGE (yrs)		
30-39	05	10
40-49	16	32
50-59	18	36
60-69	06	12
70+	05	10
GENDER		
Male	28	56
Female	22	44
DIABETES MELLITUS		
Yes	30	60
No	20	40
HYPERTENSION		
Yes	32	64
No	18	36
PULMONARY HYPERTENSION		
Yes	29	58
No	21	42

DISCUSSION:

Incessant ailments like hypertension, diabetes mellitus are persistently on rise. These ailment are the main sources of end organize renal ailment. Cardiovascular illness represents more than half of passings among patients with ESRD [6]. Certain elements have been proposed to contribute to this astoundingly expanded hazard, including dyslipidemia, homocysteinemia, oxidative pressure of uremia and hemodialysis in this populace. Job of hyperphosphatemia, AVF, raised dimensions of the calcium-phosphorus item also, hyperparathyroidism in the improvement of cardiovascular infection in ESRD has been evaluated [7]. Once ESRD builds up, the patient will need either renal transplant or dialysis. Dialysis is a twofold edge sword, next to its extremely indispensable job as renal substitution treatment; it has intense long haul impacts [8]. One of these is recently perceived turmoil of PH in patients with ESRD. It is the most under tended to complexity related with high mortality and morbidity [9]. The most noteworthy occurrence of about 58.6% was accounted for by Fabbian F et al [10]. However, the vast majority of these investigations were review and dependent on patients experiencing echocardiography for clinical signs henceforth had pre-choice predisposition. Our investigation, to the best of our insight, is the first to address this imperative issue in this piece of the world. The outcomes of our examination were likewise steady with international information and we found 58% commonness of PH in HD patients.

CONCLUSION:

We presume that PH is a noteworthy issue in ESRD patients that should be tended to in an opportune way so as to maintain a strategic distance from high danger of dismalness and mortality

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