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RELATIONSHIP BETWEEN CALCIUM PHOSPHATE PRODUCTS AND UREA REDUCTION RATIO IN PATIENTS TAKING ROUTINE HEMODIALYSIS IN DR. RAMELAN NAVAL CENTRAL HOSPITAL SURABAYA

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Introduction: Hyperphosphatemia is an important problem in hemodialysis patients because high levels of serum phosphate and calcium phosphate products (Ca x P) are associated with increased vascular calcification and cardiovascular mortality. The purpose of this study was to determine whether there is a relationship between calcium phosphate products and urea reduction ratio (URR) in patients undergoing routine hemodialysis.

Methods: Analytical descriptive research was conducted on 69 chronic kidney disease patients who underwent routine hemodialysis at Dr. Ramelan Naval Central Hospital, Surabaya. Data obtained from medical records. Descriptive analysis was performed by calculating the mean and standard deviation, and determining the relationship between calcium phosphate products and URR.

Results: The patient's mean calcium phosphate product (mg^2/dL^2) was 61.29 ± 25.53 . The patient's mean URR was 60.34 ± 12.61 . There was no relationship between calcium phosphate products and URR in patients undergoing routine hemodialysis ($p=0.63$, $r=0.06$).

Conclusions: There was no relationship between calcium phosphate products and URR of patients undergoing routine hemodialysis.

No conflict of interest



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RELATIONSHIP BETWEEN INTERDIALYTIC WEIGHT GAIN WITH MORTALITY IN PATIENTS THAT WAS ROUTINED HEMODIALYSIS IN DR. RAMELAN NAVAL CENTRAL HOSPITAL SURABAYA

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Introduction: Chronic Kidney Disease (CKD) is a public health problem worldwide. Excessive interdialytic weight gain (IDWG) is usually related to an overload of sodium and water. Higher IDWG is associated with higher predialysis blood pressure and increased mortality.

Methods: Analytical descriptive research was conducted on 99 CKD patients undergoing routine hemodialysis at Dr. Ramelan Naval Central Hospital, Surabaya. Data obtained from medical records. Descriptive analysis was performed by calculating the mean and standard deviation, and determining the relationship between IDWG and mortality in patients undergoing routine hemodialysis.

Results: The mean IDWG (kg) of patients was 2.07 ± 1.42 . The incidence of patient deaths was nine patients. There was no relationship between IDWG and mortality in patients undergoing routine hemodialysis ($p=0.70$; $r=-0.04$).

Conclusions: There is no relationship between IDWG and mortality in patients undergoing routine hemodialysis.

No conflict of interest



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COMPARATIVE ANALYSIS OF THE CAUSES OF DEATH IN DIALYSIS PATIENTS WITH AND WITHOUT CARDIOVASCULAR DISEASES

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Introduction: According to recently published WHO data, kidney disease has been the 10th leading cause of death in the world over the past 20 years. The mortality rate of patients on hemodialysis is 6.3-8.2 times higher than in the general population. The presence of cardiovascular comorbidity worsens the prognosis and survival in this



category of patients. The lethality of dialysis patients with cardiovascular pathology is 3 times higher than that of patients without cardiovascular diseases (CVD). This is especially pronounced in developing countries. The aim of our study was to study the effect of comorbidity of the CVD on survival in patients with end-stage CKD receiving programmed hemodialysis among the population of Uzbekistan.

Methods: The study involved 200 (109 men and 91 women) patients with CKD stage 5 who were on programmed hemodialysis. The average age of the surveyed was 48.1 ± 14.2 years. The study included patients with a clinically established diagnosis of stage 5 CKD in the outcome of nephropathies of various origins. GFR was calculated based on serum creatinine concentration using the CKD-Epi formula. The main initial diseases: chronic glomerulonephritis ($n = 92$), diabetes mellitus - diabetes mellitus ($n = 53$), urolithiasis ($n = 17$), chronic pyelonephritis ($n = 12$), etc. All patients were prospectively followed in 3 different centers of Uzbekistan for 24 months (from January 2018 to January 2020). During this period, 72 patients died (40 men and 32 women). The average age of the deceased was 53.6 ± 1.6 years. To identify the cause of death, the medical history and the results of the pathological examination were analyzed.

Results: Among the deceased, 68.1% ($n=49$) of patients had CVD, while 31.9% ($n=23$) did not have CVD. 43.1% ($n=31$) of patients died during the first year of follow-up, the remaining 56.9% ($n=41$) died within 2 years. The main cause of death of all patients is shown on figure 1. When analyzing the structure of death, depending on the presence of CVD, in patients with CVD, sudden cardiac death was 63% ($n=30$) of all causes of death, while in patients without CVD, it was 59% ($n=14$). Acute respiratory failure as a cause of death was detected more in patients without CVD. 29% ($n=7$) of patients died from this complication, while in patients with CVD this indicator was 13% ($n=6$). All cases of acute myocardial infarction ($n=5$) were observed in patients with CVD (10%). Deaths due to stroke and coma were also more common in patients with CVD (figure 2).

Conclusions: As our analysis shows, in Uzbekistan the primary diseases in dialysis patients are glomerulonephritis (46%) and diabetes mellitus (26.5%). Dialysis patients in our country mainly die due to cardiovascular pathologies (more than 80%). The main place in the structure of death is taken by sudden cardiac death, which is the cause of death for more than 60% of deceased patients. Other causes were acute respiratory failure, acute myocardial infarction, coma, stroke, and acute bleeding. The analysis of mortality showed that 68.1% of the patients who died had concomitant CVD, which is 2 times more than among those who died without concomitant CVD (31.9%).

No conflict of interest

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STUDY OF 2 YEAR OUTCOMES OF HUB AND SPOKE MODEL OF DIALYSIS

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Introduction: ESRD is a major health problem worldwide particularly in developing countries. The economic, human, technical resources required for long term dialysis makes it a major economic and political challenge. Most countries do not have well formed policies for providing renal care. Dialysis facilities are grossly inadequate and pose a huge economic burden in resource poor countries. Dialysis programs should be decentralized and all the available resources should be used at its maximum. Hub and Spoke model is an innovative model of dialysis to cater the needs of dialysis and providing adequate renal care to patients. This study highlights the important features of this model.

Methods: Study design is Retrospective. A Hub center is a government medical college/ institution with full-fledged department of nephrology with faculty and postgraduates. A Spoke center is a district hospital /area hospital where a specialist such as internal medicine physician or an Anaesthetist would be in-charge of dialysis unit. Working of spoke centers is monitoring by Hub team through tele surveillance and monthly visits. Data from all patients undergoing dialysis from January 2019 to December 2020 in tertiary care hospital hub and spoke centers were collected. Functioning of 11 spoke centers and epidemiological data, outcomes were analyzed.

AIM- To study the Hub and Spoke model of dialysis and to study the two year outcomes of patients undergoing hemodialysis in a tertiary center cluster.

Results: Table1: Details of HUB and SPOKE centers

