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ANALYSIS OF CHILDHOOD KIDNEY DISEASE AND RISK OF RENAL PROBLEMS IN PAKISTANI POPULATION

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Abstract:
Introduction: *Chronic kidney disease (CKD) is a major public health problem, and preventing CKD and/or delaying progression of CKD patients to end-stage renal disease (ESRD) is a major task for the nephrology community.*
Aim and objectives: *The basic aim of the study is to analyse the childhood kidney disease and risk of renal problems in Pakistani population.*
Methodology of the study: *This cross sectional study was conducted in Health Department Punjab during April 2018 to November 2018. The data was collected from 100 patients who were suffering from kidney diseases. The age range for this purpose was 1 to 10 years. For this purpose we make two groups of study. One group was control group and the other group was suffering from kidney problems. Then we collect the socio economic status and therapy status. Then we analyze the data and find that either statin therapy is helpful for patients or not.*
Results: *The data was collected from 100 patients with mean age range 5.65±6.78 years. The inappropriate activation of this system causes hypertension, fluid retention, and inflammatory, thrombotic, and atherogenic effects that may contribute to end-organ damage in the long term. Table 01 shows the values of analysis of statin therapy in patients. It shows the comparison between two groups on the basis of functional values.*
Conclusion: *It is concluded that mild kidney abnormalities or injury in childhood may confer a risk of ESRD in adulthood, even when there is no overt compromise of renal function in adolescence.*

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INTRODUCTION:

Chronic kidney disease (CKD) is a major public health problem, and preventing CKD and/or delaying progression of CKD patients to end-stage renal disease (ESRD) is a major task for the nephrology community. This looks like an achievable target, in particular because of the availability of reno-protective drugs that may interfere with disease progression such as the inhibitors of the renin-angiotensin-aldosterone system (RAAS) [1]. After the first inhibitor of angiotensin II (AII) system, the angiotensin-converting enzyme (ACE) inhibitor captopril, became available for clinical use in the early 1980s, other drugs have become progressively available that interfere with RAAS activity, such as AII-type 1 receptor blockers (ARBs) and the aldosterone(Aldos) antagonists that inhibit AII and Aldos activity by competitively antagonizing their binding to specific receptors [2]. In a short future, novel agents that interfere with renin activity (such as aliskiren) will also become available for clinical use, which will further increase the armamentarium of drugs that may interfere with the sequence of events, eventually resulting in AII and Aldos production at different levels and that, used in combination, may achieve an almost complete inhibition of the RAAS [3]. Kidney disease can affect children in various ways, ranging from treatable disorders without long-term consequences to life-threatening conditions [4]. Acute kidney disease develops suddenly, lasts a short time, and can be serious with long-lasting consequences or may go away completely once the underlying cause has been treated. Chronic kidney disease (CKD) does not go away with treatment and tends to get worse over time [5]. CKD eventually leads to kidney failure, described as end-stage kidney disease or ESRD when treated with a kidney transplantor blood-filtering treatments called dialysis [6].

Aim and objectives:

The basic aim of the study is to analyse the childhood kidney disease and risk of renal problems in Pakistani population.

Methodology of the study:

This cross sectional study was conducted in Health Department Punjab during April 2018 to November 2018. The data was collected from 100 patients who were suffering from kidney diseases. The age range for this purpose was 1 to 10 years. For this purpose we make two groups of study. One group was control group and the other group was suffering from kidney problems. Then we collect the socio economic status and therapy status. Then we analyze the data and find that either statin therapy is helpful for patients or not.

Analysis:

Student's t-test was performed to evaluate the differences in roughness between groups. Two-way ANOVA was performed to study the contributions. A chi-square test was used to examine the difference in the distribution of the fracture modes (SPSS 19.0 for Windows, SPSS Inc., USA).

RESULTS:

The data was collected from 100 patients with mean age range 5.65±6.78 years. The inappropriate activation of this system causes hypertension, fluid retention, and inflammatory, thrombotic, and atherogenic effects that may contribute to end-organ damage in the long term. Table 01 shows the values of analysis of statin therapy in patients. It shows the comparison between two groups on the basis of functional values.

Table 01: Comparison between two groups in structural and functional parameters

Group	IMT (µm)	CC (mm^2/KPa)	α	β
CKD Group	694.88±77.63	0.89±0.13	5.68±1.23	11.25±1.01
Control Group	586.87±62.12	0.96±0.08	4.77±0.62	9.24±1.24
T value	7.818	-3.115	4.712	9.004
P value	0.000	0.002	0.000	0.000

DISCUSSION:

Children with renal agenesis or renal dysplasia should be monitored for signs of kidney damage. Treatment is not needed unless damage to the kidney occurs. Ectopic kidney does not need to be treated unless it causes a blockage in the urinary tract or damage to the kidney. When a blockage is present, surgery may be needed to correct the position of the kidney for better drainage of urine [7]. If extensive kidney damage has occurred, surgery may be needed to remove the kidney. However, pathologic consequences can result from over activity of this cascade, involving it in the pathophysiology of kidney disease [8]. An activated renin-angiotensin-aldosterone system promotes both

systemic and glomerular capillary hypertension, which can induce hemodynamic injury to the vascular endothelium and glomerulus. In addition, direct profibrotic and proinflammatory actions of angiotensin II and aldosterone may also promote kidney damage [9]. Aldo plays a pathological role in CVD and kidney disease in part due to its mitogenic effects on a number of cell types in the systemic vasculature, heart and kidney [10].

CONCLUSION:

It is concluded that mild kidney abnormalities or injury in childhood may confer a risk of ESRD in adulthood, even when there is no overt compromise of renal function in adolescence.

REFERENCES:

1. Hou, W, Lv, J, Perkovic, V. Effect of statin therapy on cardiovascular and renal outcomes in patients with chronic kidney disease: a systematic review and meta-analysis. Eur Heart J. 2013;34:1807–1817.
2. Stone, NJ, Robinson, J, Lichtenstein, AH; American College of Cardiology/American Heart Association Task Force on Practice Guidelines. 2013 ACC/AHA guideline on the treatment of blood cholesterol to reduce atherosclerotic cardiovascular risk in adults: a report of the American College of Cardiology/American Heart Association Task Force on Practice Guidelines. J Am Coll Cardiol. 2014;63:2889–2934.
3. Sica DA (2001) Pharmacology and clinical efficacy of angiotensin-receptor blockers. Am J Hypertens 14: S242-S247.
4. Conlin PR, Spence JD, Williams B, Ribeiro AB, Saito I, et al. (2000) Angiotensin II antagonists for hypertension: Are there differences in efficacy? Am J Hypertens 13: 418-426.
5. Cohn JN, Tognoni G (2001) Valsartan heart failure trial investigators. A randomized trial of the angiotensin-receptor blocker valsartan in chronic heart failure. N Engl J Med 345: 1667-1675.
6. Zoja C, Corna D, Camozzi D, Cattaneo D, Rottoli D, et al. (2002) How to fully protect the kidney in a severe model of progressive nephropathy: a multidrug approach. J Am Soc Nephrol 13: 2898-2908.
7. Remuzzi A, Mazerska M, Gephardt GN, Novick AC, Brenner BM, et al. (1995) Three-dimensional analysis of glomerular morphology in patients with subtotal nephrectomy. Kidney Int 48: 155-162.
8. Mauer M, Zinman B, Gardiner R, Suissa S, Sinaiko A, et al. (2009) Renal and retinal effects of enalapril and losartan in type 1 diabetes. N Engl J Med 361: 40-51.
9. Bakris GL, Weir MR (2000) Angiotensin-converting enzyme inhibitor-associated elevations in serum creatinine: is this a cause for concern? Arch Intern Med 160: 685-693.
10. Benjamin EJ, Wolf PA, D'agostino RB, Silbershatz H, Kannel WB, et al. (1998) Impact of atrial fibrillation on the risk of death: the Framingham Heart Study. Circulation 98: 946-952.