

**STUDY ON SPECTRUM OF RENAL DISEASES IN ELDERLY PATIENTS ATTENDING
A TERTIARY CARE HOSPITAL****¹*Dr. Veerapandian and ²Dr. Vinoj**^{1,2}Assistant Professor, Department of General Medicine, Tirunelveli Medical College, Tirunelveli.***Corresponding Author: Dr. Veerapandian**

Assistant Professor, Department of General Medicine, Tirunelveli Medical College, Tirunelveli.

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ABSTRACT

Background: The aim of the study is to study the pattern of renal diseases in elderly subjects and the etiology causing them in patients attending Stanley medical college, Chennai. **Materials and Methods:** Elderly patients above 65 years (n=75) attending nephrology outpatient department from June 2014 to September 2014, with raised urea, creatinine values, abnormal urinalysis reports and electrolyte imbalance were analysed. **Results:** The study population included 48 males and 27 female patients. CKD was seen in 49.33% patients. AKI reported in 36% patients. Sepsis contributed to large part of AKI (44.4%). dehydration due to gastroenteritis contributed to AKI in 29.62% patients. Other causes are BPH in 14.81% and Carcinoma cervix in 3.7% patients. Glomerular diseases were seen in 6 patients (8%). This includes membranous nephropathy (2 patients), acute glomerulonephritis (2 patients) and myeloma kidney seen in 2 patients. Other diseases seen in 6.66% of study population. This includes polycystic kidney seen in 3 patients, simple cysts in 2 patients. **Conclusion:** Good control of diabetes and hypertension in younger age may prevent the occurrence of CKD as they grow older. Elderly patients should avoid taking over the counter drugs.

KEYWORDS: India, Elderly patients, renal diseases, spectrum.**INTRODUCTION**

One of the most striking changes in the demography of the world has been the increased proportion of elderly individuals in the population, who are considered as the "Geriatric" individuals of age 65 years and above.^[1] The relevance of this to health and social services is that there is exponential increase in disability and mental and physical morbidity in geriatrics.^[2] Ageing can be described from a physiologic standpoint, as a progressive constriction of the homeostatic reserve of every organ system. This decline referred to as homeostasis is evident by the third decade and is then gradually progressive.^[3,4]

Alterations in kidney function occur with advancement of age. Increased susceptibility to systemic diseases and exposure to multiple drugs makes the elderly people more likely to kidney diseases.^[5,6,7] This study is about the various pattern of renal diseases among elderly patients and various etiological factors causing them.^[8-11] Based on this the aim and objectives of the study are to study the patterns of renal diseases in elderly patients and to study the various etiologies affecting kidney function in elderly patients.

MATERIALS AND METHODS

This study was done in department of nephrology, nephro opd and wards, and medical wards at stanley medical college and hospital, chennai. With duration of

four months as a prospective observational study with sample size of 75. Study was conducted only after getting approval of the institutional ethics committee. a copy of the approval is enclosed.

Patients with age more than 65 years, raised urea, creatinine values and patients with hematuria, proteinuria, abnormal urine sediments and also patients with electrolyte imbalance were included in the study while patients less than 65 years were excluded from the study. Patients will be subjected to symptom analysis, clinical examination, laboratory investigations and imaging studies. the final analysis will be made at the end of the study to achieve the fore mentioned goals using appropriate statistical methods.

RESULTS AND DISCUSSION

This study included 75 patients. Patients were subjected to urine analysis, blood investigations, USG abdomen and other investigations as needed as per the proforma. Renal biopsy was done in 6 subjects as it was required for diagnosis. 8 patients died during the study due to various reasons.

Table 1: Age Distribution of Study Group.

Age (years)	Number of patients	Percentage
65-70	56	74.66
71- 80	17	22.66
>80	2	2.66

Among the 75 patients studied most of the patients were between 65 and 70 years. 56 (76.66%) patients were between 65-70 years, 17 patients were between 71 - 80 years. Only 2 (2.66%) patients were above 80 years. Among the 75 patients, 48 (64%) were males and 27(36%) patients were females.

Table 3: Prevalence of Diabetes and Hypertension In Study Group.

	No. of patients	Percentage
DIABETES	39	52
HYPERTENSION	26	34.66
BOTH	7	9.33

The prevalence of diabetes in the study group was 39 patients (52%) and that of hypertension was among 26 (34.66%) patients. Both diabetes and hypertension were seen in 7 (9.33%) patients.

Table 4: Distribution of Symptoms In the Study Population.

Symptoms	No.of patients	Percentage
Pedal edema	24	32
breathlessness	8	10.66
oliguria	4	5.33
Burning micturition	12	16
hematuria	9	12
fever	5	6.66
anemia	5	6.66

The USG findings in the study group was as follows: contracted kidneys found in 35(46.66%) patients which indicates end stage renal disease(ESRD). Normal sized kidneys found among 35(46.66%) patients. Increased size with multiple cysts seen among 3(4%) patients. Simple cysts seen among 2(2.66%) patients. Enlarged prostate seen in 4 (5.33%) patients. Renal /ureteric calculi seen in 2 (2.66%) patients.

Table 5: Ultrasound Findings In The Study Group.

Usg findings	No.of Patients	Percentage
Contracted kidneys	35	46.66
Normal sized kidneys	35	46.66
Enlarged kidneys	3	4
Simple cysts	2	2.66
Enlarged prostate	4	5.33
Renal/ureteric calculi	2	2.66

Among the 75 patients, 37 patients(49.33%) were found

to have CKD. 27 patients (36%) had AKI. Glomerular diseases seen in 6 patients (8%). This included membranous nephropathy among 2 patients, post infectious glomerulonephritis (2 patients), myeloma kidney (2 patients). Other diseases contributed to 6.66% of the study population. This includes polycystic cystic kidney among 3 patients, simple cysts seen in 2 patients.

Table 6: Pattern of Renal Diseases in the Study Population.

Diagnosis	No.of patients	Percentage
CKD	37	49.33
AKI	27	36
Glomerular diseases	6	8
Others	5	6.66

Among the study population, 27 patients (36%) had acute kidney injury(AKI) Sepsis contributed to AKI in 12 patients (44.44%). Acute gastroenteritis leading to dehydration was seen in 8 patients(29.62%). Others were BPH in 14.81%, carcinoma cervix in 3.70% and calculi in 4.7% patients.

Table 7: Etiology of Aki in the Study Population.

Causes	No. of Patients	Percentage
sepsis	12	44.44
Acute gastroenteritis	8	29.62
BPH	4	14.81
Ca cervix	1	3.70

DISCUSSION

Affifi et al has done a study among 220 elderly patients in Ain shams university and Nasser institute hospitals, cairo, Egypt. This study showed diabetic nephropathy in 28.2%, hypertensive nephrosclerosis 25.5%, UTI, cystitis and pyelonephritis in 6.8%, renal stones in 5.9%, obstructive nephropathy in 7.6%, simple cysts in 4.5%, CRF of unknown origin in 13.1%. Multiple myeloma, lupus nephritis, vasculitis recorded in few numbers.

Prakash. J, Saxena RK, Sharma OP et al has done a study among 200 hundred patients over the age of 60 years in india. The clinical presentation included chronic renal failure (42.5%), acute renal failure (28%); nephrotic syndrome (14.5%); acute glomerulonephritis (7.5%); renal vascular disease (5%) and renal cystic disease (2.5%). Diabetic nephropathy, obstructive uropathy and hypertensive nephrosclerosis were the major causes of CRF, accounting for 80% of total CRF in the elderly. Prerenal ARF, obstructive uropathy and sepsis were contributing factors for ARF in 82% of the cases. Volume depletion due to gastrointestinal fluid loss and urinary tract obstruction on account of enlarged prostate were the leading causes of ARF in 20 (35.7%) and 8 (14.3%) cases respectively.

Agarwal et al has done a study on spectrum of renal diseases in indian adults. Chronic renal failure (CRF),

nephrotic syndrome (NS), nephritic syndrome and hypertension were the four common presentations seen in 47.8%, 15.03%, 4.6% and 4.9% cases respectively.

Prakash J et al has done a study on glomerular diseases in elderly people. The clinical presentation of GN included: nephrotic syndrome 61.5%, acute nephritic syndrome 29.2%, rapidly progressive GN 6.15% and asymptomatic urinary abnormality 3%. Overall, primary and secondary glomerular disease were seen in 72.3% and 27.6% elderly patients.

Renal disease in the elderly and the very elderly Japanese: analysis of the Japan Renal Biopsy Registry (J-RBR). Primary glomerular disease was the most frequent diagnosis, followed by MPO- ANCA-positive nephritis, IgA nephropathy (IgAN), and diabetic nephropathy.

CONCLUSION

The study was done to know about the pattern of renal diseases among elderly patients. Majority of the patients were found to have CKD(49.33%) Diabetes and hypertension are the major risk factors in CKD patients. AKI was seen in 36% patients. Sepsis contributed to large part of AKI (44.4%). dehydration due to gastroenteritis contributed to AKI in 29.62% patients. Other causes are BPH in 4.81% and Ca cervix in 3.7% patients. Glomerular diseases were seen in 6 patients (8%).

This includes membranous nephropathy (2 patients), acute glomerulonephritis (2 patients) and myeloma kidney seen in 2 patients. Other diseases seen in 6.66% of study population. This includes polycystic kidney seen in 3 patients, simple cysts in 2 patients. Good control of diabetes and hypertension in younger age may prevent the occurrence of CKD as they grow older. Elderly patients should avoid taking over the counter drugs.

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