



End Stage Renal Failure Study and Correlation on same Parameter

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Abstract

End stage renal failure of varying degrees of severity been seen in our clinics, there is no statistical evidence of the magnitude of the problem in Wasit province and many areas in our country. This study conducted to determine the most probable etiological causes of end stage renal failure, in wasit province. This studies ninety one patients of end stage renal failure, who are receiving their renal replacement therapy in dialysis department of AL-Kut hospital, aged 15 years and over. The study show of the 91 adults studied, cases of ESRF were identified, 30 of them where of unknown cause, 26 of them the hypertension was the main cause, 19 of them DM was the main cause, infective and obstructive causes in 9 patients, while the glomerulonephritis in 5 patients and familial causes were present in 3 patients and only one with congenital disease. It was noted that the unknown cause for the ESRD was the main factor and the was the second cause in our study and this differ from a lot of studies in the world .and also there was clear effect for the age and sex on the etiological causes.

Key Words: Renal Failure, Health, Hypertension.

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Introduction

Chronic kidney disease Evidence of structural or functional kidney abnormalities (abnormal urinalysis, imaging studies, or histology) that persist for at least three month, with or without a decreased GFR (as defined by a GFR of less than 60 milliliter / min per one. 73 m2). 1,2,3 The most common manifestation of kidney damage is persistent albuminuria, including microalbuminuria.

7 OR Decreased GFR, with or without grounds of kidney damage. 2 When the kidney fails to perform most of its function, the clinical state is labeled end-phase renal disease (ESRD), and dialysis or transplant is required to sustain life. 1,2 Based upon these definitions, the following is the recommended classification of chronic kidney disease by stage⁴⁻⁹ :

1. First stage: is defined by a normal GFR (greater than 90 mL/min per 1.73 m²) and persistent albuminuria (1.8 percent of the total United States population)
2. Second stage is a GFR between 60 to 89 mL/min per 1.73 m² and persistent albuminuria (3.2 percent)
3. Third stage is a GFR between 30 and 59 mL/min per 1.73 m² (7.7 percent)
4. Four stage is a GFR between 15 and 29 mL/min per 1.73 m² (0.21 percent)
5. Stage 5 disease is a GFR of less than 15 mL/min per 1.73 m² or end-stage renal disease (2.4 percent for stages 5)

In our study we try to determine the main etiological risk for end stage renal failure in wasit governorate and this may help us to educate the people about this very important disease and its main causes.

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Materials and Methodes

Patients

This cross-sectional study was carried out during a period from March 2018 till September 2019 in dialysis unit of Al-kut hospital. Ninety one patients with ESRF who were diagnosed and on renal replacement therapy, were enrolled in the study.

Demographic Variables

Patients were evaluated in term of their sex, age, disease duration, marital status and Residence.

Materials

History and clinical examination, Complete blood count (CBC), blood urea, serum creatinine, serum electrolytes, blood sugar, blood pressure, general urine examination ultrasonography of abdomen specially for renal system.

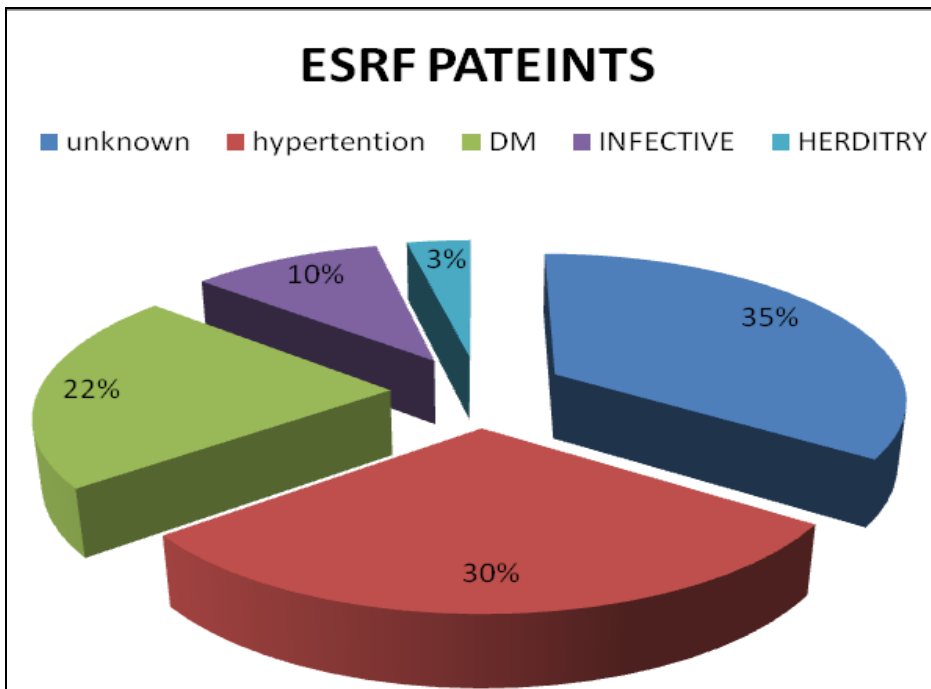
Statistical Analysis

Etiological parameters, and the sex of the patients were separately compared and data are presented as tables.

RESULTS

Ninety one patients with end stage renal failure were included in the study. Ages of the patient's between 15-75 years.

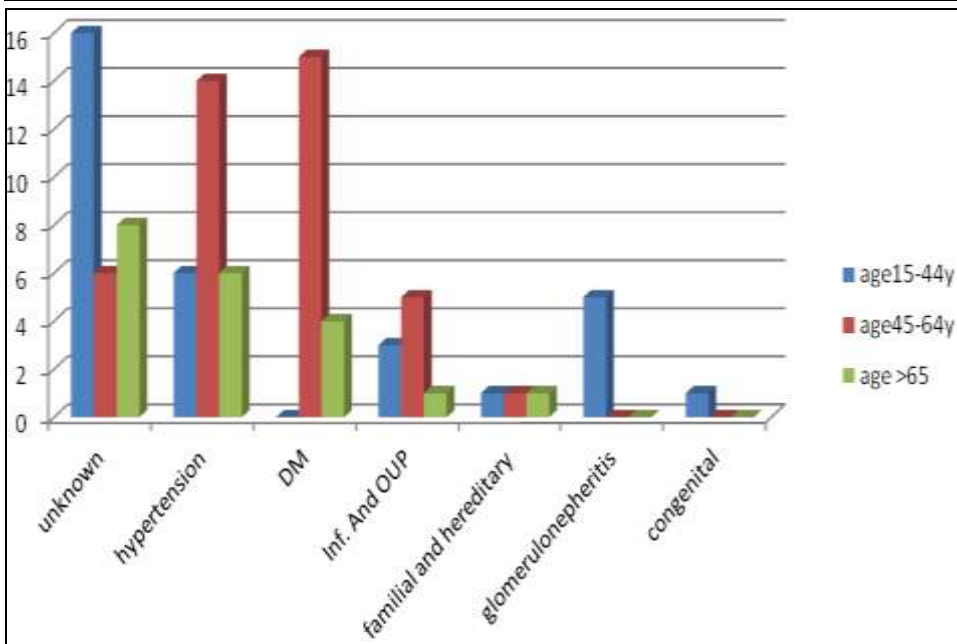
From these patients with end stage renal failure there was -30 patients the main factor for their ESRF were unknown, 26 patients were present with hypertension as the main cause for ESRF, while DM were present in 19 patients, while the infective and obstructive cause were present in 9 patients, and glomerulonephritis and familial causes were found in 5 patients and 3patients respectively and congenital disease only in one patient as showing the diagram below



In our study we found the unknown cause were predominantly present in the patients aging from 15-44y. while hypertension, DM, infective and obstructive nephropathy present the main risk for ESRF as showing below in the table and diagram.

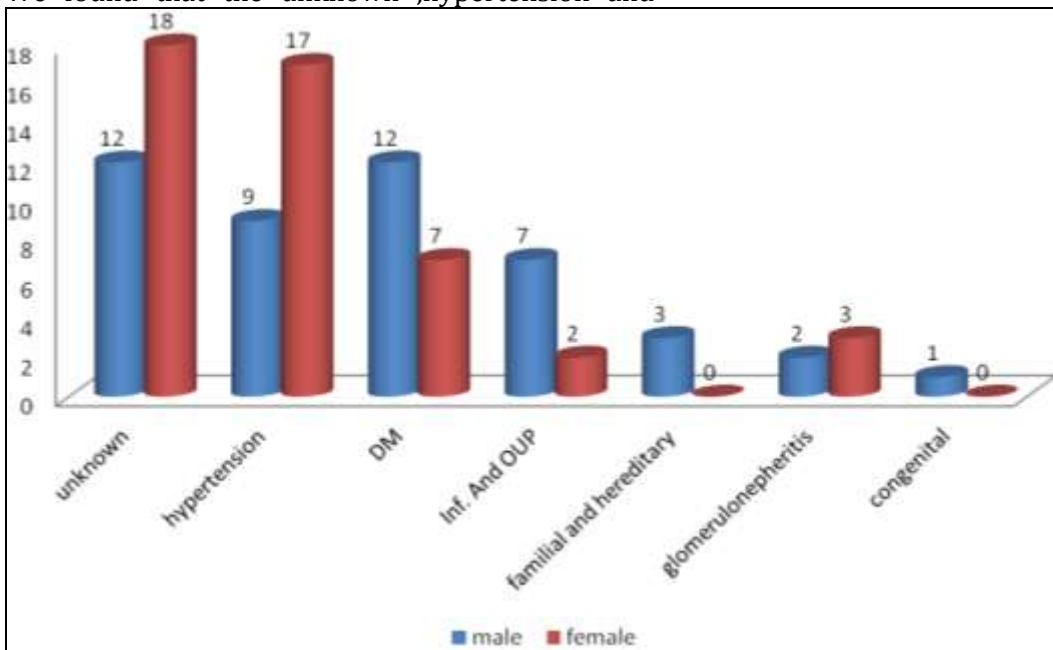
Main cause	Age 15y - 44y	Age 45y - 64y	Age >65y
unknown	16	6	8
hypertension	6	14	6
DM	0	15	4
Infective and obstructive uropathy	3	5	1
glomerulonephritis	5	0	0
Familial and hereditary	1	1	1
congenital	1	0	0





Also in our study we found that the gender also effect on the disruption of the risk factor for ESRF. We found that the unknown ,hypertension and

glomerulopathy more in female while the other risk factors more in male specially DM as showing in diagram below



DISCUSSION

End-stage renal disease (ESRD) is an extremely debilitating condition and is associated with significant morbidity and mortality and the incidence and prevalence of the disease continue to grow rapidly 14.

In our study we found that unknown cause represent the main reason for ESRF (35%), while in another studies the most frequent cause of CKD is

diabetic nephropathy, most often secondary to type 2 diabetes mellitus. 1,3 while the second main cause in our study was the hypertension represent (30%), while DM represent the third cause (22%). Also in our study we found that there is significant variation in etiological, causes in regarding the age of patients, where the main cause for ESRF in age 15year-44year was unknown, glomerulonephritis and congenital diseases while in age 45y-64y were hypertension, DM and infective and obstructive causes are the main etiological causes, and this is similar to other studies15, but in our study the



main cause was the hypertension in the age between 45y-64y and this differ from other studies and what are mentions in books 1,2

Also in our research we look for the effect of gender, and we find that the unknown causes and hypertension mainly effect the females while the DM was mainly effect males which is differ in other studies which mentioned that DM effect mainly in females 15,16.

Recommendation

Taken this current study and previous studies we believe that by a periodical thorough education of people about this very dangerous disease and the possibility of prevention by education about these main causes and risk factors.

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