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Research Article

**STUDY TO KNOW THE VARIOUS BENIGN CONDITIONS OF
KIDNEY DISEASE CAUSES NEPHRECTOMY****Dr. Muhammad saqib Khurshid, Dr. Umme Kalsoom Rabbi, Dr. Anum Waqar
Jinnah Hospital Lahore****Abstract:**

Objective: To determine the incidence of various benign conditions that cause kidney failure and cause nephrectomy.

Study design: A Descriptive study.

Configuration and duration: In the Urology Department Unit II of Services Hospital Lahore for one year duration from August 2017 to August 2018.

Methodology: All patients who underwent nephrectomy were included in this study. 189 patients underwent nephrectomy, of which 115 had non-functioning kidney. Full history was taken and all patients were examined and examined in detail. Special attention was given to assess the functions of the contralateral kidney. Patients were followed up with serial ultrasound and renal function tests for contralateral kidney in OPD.

Results: The incidence of non-functional kidney was 60.84%. The majority of patients with non-functional kidneys had calculus 61 (53.04%) or congenital hydronephrosis 20 (17.39%). The reason for the high number of non-functional kidneys was that patients reported to the hospital too late. Some healers had also treated prolonged as some of these patients had asymptomatic hydronephrosis and congenital and staghorn calculation and others ignored their symptoms and had a widespread problem in areas without adequate health facilities.

Conclusion: Most of the kidneys can be protected and nephrectomy can be prevented by appropriate treatment of benign conditions leading to early diagnosis and non-functional kidney.

Key words: nephrectomy, non - functional kidney, calculus, hydronephrosis.

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INTRODUCTION:

Kidney surgery is increasingly conservative and radical in patients with long-term cortical atrophy, such as hydronephrosis, cortical disease, infection, renovascular hypertension, trauma, and nephrectomy for benign conditions such as trauma. Even when the malignant disease is bilateral or contralateral renal dysfunction, renal protection operation is even necessary. Donor nephrectomy is performed as part of the kidney transplantation procedure.

New technical advances have improved the working technique of the kidney, for example; Angiography improved the understanding of the vascular anatomy of the kidney. Similarly, cooling and kidney protection methods gave the surgeon enough time to work without rush or loss of blood. Renal transplantation has opened up the areas of kidney transplantation that prevent ischemia. Also, the discovery of less flat blood and treatment of the cut surface of the kidney allowed reconstruction of the patch without loss of bleeding or function. Due to these developments, ablative surgery is limited to kidneys that do not work today and only have tumors. The majority of these patients with non-functional kidneys were incidentally found in congenital asymptomatic hydronephrosis or as deer horn stones. However, other patients presented with pain, recurrent urinary tract infection (UTI), hematuria and lower urinary tract symptoms (LUTS).

MATERIALS AND METHODS:

This Descriptive study was held in the Urology Department Unit II of Services Hospital Lahore for one year duration from August 2017 to August 2018.

All patients who underwent nephrectomy because of renal failure were included in the study. Patients undergoing partial nephrectomy were excluded from the study. All patients underwent complete history, clinical examination, complete blood staining, serum urea, creatinine, electrolytes, complete urine test and cultures. Kidney ureter and bladder ultrasonography (USG KUB) and intravenous urography (I.V.U) to assess the functional status of the kidneys. Computed tomography of the abdomen (CT) was performed in patients with invasive lesions (SUN) of the kidney. Renal scintigraphy was performed with diethyl enetriaminepentaacetic acid (DTPA) in non-functional kidneys. All patients were informed about the procedure and related complications and informed consent was obtained.

A standard lumbar approach was applied to the 12th rib in all patients with xanthogranulomatous pyelonephritis and benign conditions in patients with previous multiple operations unless the diagnosis was suspicious. However, a transperitoneal approach was adopted for patients with renal tumors. All resected specimens were sent for histopathological examination. They were mobilized from bed (4-5 days) and followed by OPD to assess renal function and recurrence of the disease on the opposite side with the serial test.

RESULTS:

189 patients were included in this study. Patients included in all age groups. Youngest patient was 78 years old and over 110 patients were male and 79 were female.

Table 1: Age Distribution (N=115)

Age Group	Frequency	Percentage
< 10	11	9.56
10-20	18	15.65
20-30	35	30.43
30-40	30	26.08
> 40	21	18.26

The majority of patients were young people of the 4th year of life.

Table 2: Nephrectomy [Total] (N=189)

Cause	Frequency	Percentage
Non Functioning Kidney	115	60.84
Space Occupying lesion of kidney	27	14.08
Donor Nephrectomy	29	15.34
Chronic Renal Failure (Transplant Recipient)	2	1.05
Renal Vascular Hypertension	9	4.76
Trauma	4	2.11
Tuberculosis	3	1.58

The causes of nonsurgical nephrectomy are shown in Table II, while the non-functional renal causes are shown in Table III.

Table 3: Benign Conditions Requiring Nephrectomy (Non Functional Kidney) (N=115)

Cause	Frequency	Percentage
Pyelonephritis	18	15.65
Calculus Disease	61	53.04
Glomerulonephritis	1	0.86
Hydronephrosis	20	17.39
Congenital Dysplastic Kidney/Acquired Cystic Disease	10	9.69
Xanthogranulomatous Nephritis	5	4.34

DISCUSSION:

Nephrectomy is rarely a procedure that is being performed today because of the advanced surgical techniques and the presentation of most benign conditions that require early diagnosis and ultimately nephrectomy. Ablative surgery is currently limited to non-functional kidneys and tumors. A few cases that require a simple nephrectomy:

- Secondary nonfunctional kidneys
- calculus disease
- Pyelonephritis
- Xanthogranulomatous nephritis
- TB
- Hydronephrosis (congenital / acquired)
- Vascular disorders
- Acquired cystic disease.
- Non-functional dysplastic kidney (congenital)
- Sclerotic kidneys in renal hypertension.
- Pyonephrosis
- Degree V Injury

Simple nephrectomy is indicated in patients with chronic symptomatic infection, congestion, severe disease, or calculation of traumatic injury irreversible kidney damage. In some cases, the patient's age and general condition is too bad to provide treatment in a

manner provided that the opposite kidney is normal, which is suitable for removing a functional kidney involved with one of these conditions. Nephrectomy may also be indicated for the treatment of renovascular hypertension due to acute unilateral parenchymal damage to the disease due to non-correctable renal artery or nephrosclerosis, pyelonephritis, reflux, or dysplasia. Because both atherosclerosis and wall dysplasia are potentially bilateral entities, reconstructive surgery should be clearly preferred when the kidneys are healthy when the kidneys are healthy. However, nephrectomy may be indicated in elderly patients or in high-risk patients. Nephrectomy may also be indicated when artificial reconstruction fails or uncontrolled bleeding due to unilateral renal infarction. Nephrectomy may also be indicated for a severe unilateral parenchymal disease and for stenosis or weak current in a previous vascular repair that does not respond to balloon angioplasty. In our study, nephrectomy was performed for renovascular hypertension in 9 (4.76%) patients. In all these patients, while the affected kidney was atrophic and defective, the control of postoperative blood pressure was satisfactory.

Pyelonephritis is treated medically unless the patient responds to treatment⁶. Surgical treatment should be a complete excision because most of the attempts to maintain renal function have not been successful in reviewing renal function or reducing patient morbidity. 18 (15.06%) patients had unilateral simple nephrectomy due to chronic pyelonephritis. Nephrectomy is rarely indicated for the treatment of kidney stones. This is especially true in elderly patients with significant concomitant medical problems where the contralateral kidney is normal. In most of the patients presented, there were 61 (53.04%) long-term dental disease with severe kidney damage. Most of these patients belonged to poor socioeconomic groups and had a history of treatment due to earthquakes or judges.

Of the 189 patients, 115 (60.84%) had non-functional kidneys. There is a large percentage of non-functional kidneys requiring nephrectomy. The causes of the last stage of the disease are due to the ignorance of some of the patient and the self-medication of the first symptoms and the failure of the doctors to suspect kidney disease, and the adequate follow-up and follow-up of the patients.

CONCLUSION:

Even in this advanced medical age, many patients undergo nephrectomy due to benign kidney disease in the developing world. This is mainly due to a lack of medical facilities in remote areas, as well as ignorance in patients. First of all, treatment by quacks and hakims delay the search for appropriate medical management. The number of non-functional kidneys due to benign conditions and therefore nephrectomy can be significantly reduced by timely and appropriate diagnosis and treatment of patients. The message of this study is that patients with urological symptoms should not be ignored and each patient should be investigated, managed and followed in detail to prevent this ablative surgery. It also requires public awareness and the provision of medical facilities in remote areas.

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