PREVALENCE OF DERANGED RENAL FUNCTION TESTS AMONG PATIENTS PRESENTING IN OUTDOOR DEPARTMENT

AUTHORS:
1. DR. SUMAIYA MUZAFFAR, BASIC HEALTH UNIT HOEKEY
2. DR. AZATULLAH, DHQ TEACHING HOSPITAL MTI DERA ISMAIL KHAN
3. DR. EHSAN UL HAQ GOVT CITY HOSPITAL GILGIT

ABSTRACT:
Renal function can be assessed in many different ways i.e., using the presence of symptoms and signs, as well as measurements using urine tests, blood tests, and medical imaging. This cross-sectional study was conducted among the patients presenting in the nephrology outdoor department of different hospitals. Name, age, gender, renal function tests i.e. urea and creatinine levels were noted on a predefined proforma. All the data was entered and analyzed with SPSS Ver. 23.0. A total of 50 patients were included in this study i.e., 25 males (50%) and 25 females (50%). The mean age of the patients was 41.45±4.32 years. The renal function tests of all the patients were taken from the lab. Out of 50 patients, three patients had deranged urea / creatinine levels. Rest of the patients had normal levels.

Keyword: Renal Function Test
INTRODUCTION:
Renal function can be assessed in many different ways i.e., using the presence of symptoms and signs, as well as measurements using urine tests, blood tests, and medical imaging. Functions of a healthy kidney include maintaining a person’s fluid balance, maintaining an acid-base balance; regulating electrolytes including sodium, potassium, and other electrolytes; clearing toxins; regulating blood pressure; and regulating hormones, such as erythropoietin; and activation of vitamin D. The functions of the kidney include maintenance of acid-base balance; regulation of fluid balance; regulation of sodium, potassium, and other electrolytes; clearance of toxins; absorption of glucose, amino acids, and other small molecules; regulation of blood pressure; production of various hormones, such as erythropoietin; and activation of vitamin D. Much of renal physiology is studied at the level of the nephron, the smallest functional unit of the kidney. Each nephron begins with a filtration component that filters the blood entering the kidney. This filtrate then flows along the length of the nephron, which is a tubular structure lined by a single layer of specialized cells and surrounded by capillaries. The major functions of these lining cells are the reabsorption of water and small molecules from the filtrate into the blood, and the secretion of wastes from the blood into the urine.

Proper function of the kidney requires that it receives and adequately filters blood. This is performed at the microscopic level by many hundreds of thousands of filtration units called renal corpuscles, each of which is composed of a glomerulus and a Bowman’s capsule. A global assessment of renal function is often ascertained by estimating the rate of filtration, called the glomerular filtration rate (GFR). Clinical assessment can be used to assess the function of the kidneys. This is because a person with abnormally functioning kidneys may have symptoms that develop. For example, a person with chronic kidney disease may develop oedema due to failure of the kidneys to regulate water balance. They may develop evidence of chronic kidney
disease that can be used to assess its severity, for example high blood pressure, osteoporosis or anaemia. If the kidneys are unable to excrete urea, a person may develop a widespread itch or confusion. Part of the assessment of kidney function includes the measurement of urine and its contents. Abnormal kidney function may cause too much or too little urine to be produced. The ability of the kidneys to filter protein is often measured, as urine albumin or urine protein levels, measured either at a single instance or, because of variation throughout the day, as 24-hour urine tests (1-3). The objective of this study was to see the prevalence of deranged renal function tests i.e. deranged urea and creatinine levels among the patients presenting in the nephrology outdoor department.

**MATERIAL AND METHODS:**
This cross-sectional study was conducted among the patients presenting in the nephrology outdoor department of different hospitals. Name, age, gender, renal function tests i.e. urea and creatinine levels were noted on a predefined proforma. All the data was entered and analyzed with SPSS Ver. 23.0. The quantitative variables were presented as mean and standard deviation. The qualitative variables were presented as frequency and percentages.

**RESULTS:**
A total of 50 patients were included in this study i.e., 25 males (50%) and 25 females (50%). The mean age of the patients was 41.45±4.32 years. The renal function tests of all the patients were taken from the lab. Out of 50 patients, three patients had deranged urea / creatinine levels. Rest of the patients had normal levels.

**DISCUSSION:**
A decreased renal function can be caused by many types of kidney disease. Upon presentation of decreased renal function, it is recommended to perform a history and physical examination, as well as performing a renal ultrasound.
and a urinalysis. The most relevant items in the history are medications, edema, nocturia, gross hematuria, family history of kidney disease, diabetes and polyuria. The most important items in a physical examination are signs of vasculitis, lupus erythematosus, diabetes, endocarditis and hypertension. A urinalysis is helpful even when not showing any pathology, as this finding suggests an extrarenal etiology. Proteinuria and/or urinary sediment usually indicates the presence of glomerular disease. Hematuria may be caused by glomerular disease or by a disease along the urinary tract. The most relevant assessments in a renal ultrasound are renal sizes, echogenicity and any signs of hydronephrosis. Renal enlargement usually indicates diabetic nephropathy, focal segmental glomerular sclerosis or myeloma. Renal atrophy suggests longstanding chronic renal disease.

The kidney function can also be assessed with medical imaging. Some forms of imaging, such as kidney ultrasound or CT scans, may assess kidney function by indicating chronic disease that can impact function, by showing a small or shrivelled kidney. Other tests, such as nuclear medicine tests, directly assess the function of the kidney by measuring the perfusion and excretion of radioactive substances through the kidneys. Blood tests are also used to assess kidney function. These include tests that are intended to directly measure the function of the kidneys, as well as tests that assess the function of the kidneys by looking for evidence of problems associated with abnormal function. One of the measures of kidney function is the glomerular filtration rate (GFR). Other tests that can assess the function of the kidneys include assessment of electrolyte levels such as potassium and phosphate, assessment of acid-base status by the measurement of bicarbonate levels from a vein, and assessment of the full blood count for anaemia (4-6).

REFERENCES:
normally. Renal and urologic disorders may strike anyone at any age and at any time.


4. Nosek, Thomas M. "Section 7/7ch04/7ch04p11". Essentials of Human Physiology. Archived from the original on 2016-03-24. – "Glomerular Filtration Rate"
