Kidney Disease

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The Kidney

- The kidney is a bean-shaped organ that is about the size of a fist. Everyone has two kidneys, which are located in the middle of the back, on the left and right of the spine, just below your rib cage.
- The main function of the kidney is to filter the blood, removing wastes, minerals, and excess water to create urine. These organs also help control blood pressure and produce hormones that the body needs to stay healthy. When the kidneys are damaged, however, wastes can build up within the body, and this deterioration in function is known as kidney disease.
- Without significant early symptoms, kidney disease is impossible to diagnose without completing blood and/or urine testing. Unfortunately, many sufferers do not complete these tests until the disease has already caused significant damage to their kidneys , affecting their overall health.
- Understanding the risk factors for kidney disease is a vital step in preventing the disease and getting early diagnosis and treatment.
- Without intervention, kidney disease can progress in to kidney failure, which may ultimately lead to death.

Understanding Kidney Disease

- Kidney disease is the result of damaged kidneys that can no longer remove wastes and excess water from the body as they should. According to the Centers for Disease Control and Prevention, more than 30 million Americans may have chronic kidney disease.
- The main risk factors for developing kidney disease are:
  - Diabetes
  - High blood pressure
  - Cardiovascular disease
  - A family history of kidney failure
- Every kidney contains around 1 million filtering units comprised of blood vessels, known as glomeruli. Conditions such as diabetes and high blood pressure can damage these blood vessels, but this damage often occurs slowly, over many years. This gradual deterioration is called chronic kidney disease. As glomeruli are damaged, kidneys become less effective at maintaining proper health.

Help Keep Clients Healthy

- Help clients at risk for kidney disease keep their kidneys healthy with the following steps:
  - Ensure that patients are informed and educated about blood and urine testing for kidney disease.
  - Monitor and manage conditions such as diabetes, high blood pressure, high cholesterol and/or heart disease.
  - Encourage a healthy diet with fresh fruits, vegetables, whole grains, low-fat dairy foods and limited salt.
  - Encourage physical activity and weight loss, as appropriate.
  - Assist and educate patients in taking medications as prescribed by the physician.
- Following these steps and limiting risk factors can delay or even prevent kidney disease

Symptoms and Diagnosis

- Kidney disease is often called a “silent” disease, because most people have no symptoms with early kidney disease. Unfortunately, it is possible for those with kidney disease to feel fine until the kidneys have almost completely stopped working.
- Blood and urine tests are the only way to check the kidney damage or measure kidney function. If a patient has any of the risk factors, testing for kidney disease may be recommended.

Kidney Failure

- Kidney disease can get worse over time, ultimately leading to kidney failure. Kidney failure is advanced kidney damage where kidneys perform at less than 15% of the normal function. End-stage renal disease (ESRD) is kidney failure treated by dialysis or kidney transplant. If the kidneys fail, treatment options such as dialysis or a kidney transplant can help replace kidney function.

Early Treatment

- Lifestyle changes recommended during the early stages of kidney disease include:
  - Making heart-healthy food choices and exercising regularly to maintain a healthy weight.
  - Effectively monitoring and maintaining diabetes or high blood pressure to keep them from causing further damage to your kidneys.
  - Consuming less than 1500 milligrams of sodium each day.
  - Eating the right amount of protein. Excess protein makes your kidneys work harder. Eating less protein may help delay progression to kidney failure.
  - Quitting smoking. Cigarette smoking can make kidney damage worse

Treatment for Later Stages

- If kidney disease progresses to kidney failure, the goal of treatment changes. There are two main options for kidney disease in this stage: dialysis and transplantation. Patients suffering from kidney failure should be educated on their treatment options.
- Dialysis
  - Dialysis is a treatment that takes waste products and extra fluid out of the body. There are two main forms of dialysis- hemodialysis and peritoneal dialysis.
    - In hemodialysis, the blood passes through a filter located outside of the body, where the blood is cleaned and returned to the body.
    - Peritoneal dialysis uses the lining of a patient's abdominal cavity to filter the blood. It works by putting a special fluid into the abdomen that absorbs waste products in the blood as it passes through small blood vessels in this lining. This fluid is then drained away. Peritoneal dialysis can often be done at home as a patient sleeps.

Treatment for Later Stages Continued

- Kidney transplant- Instead of dialysis, some people with kidney failure may be able to receive a kidney transplant. This treatment requires having a healthy kidney from another person surgically placed into the body. The donated kidney replaces the failed kidneys.
- A donated kidney can come from:
  - An anonymous donor who has recently died.
  - A living person-usually a relative
  - An unrelated donor, including a spouse or friend
- Unfortunately, due to the shortage of donated kidneys, patients on the waiting list for a donor kidney may have to wait years.
- It is important for clients to understand that a kidney transplantation is not a cure. Patients will need to be seen by a physician regularly and will need to take medications for as long as they have the transplant to suppress the immune system to limit the risk of rejection of the transplanted kidney.