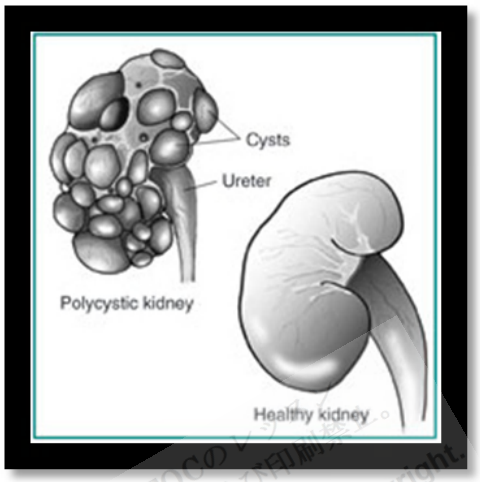
Polycystic Kidney Disease

Polycystic kidney disease is a kidney disorder passed down through families in which many cysts form in the kidneys, causing them to become enlarged.



The polycystic kidney roughly retains the same shape as the healthy kidney.

Causes

Polycystic kidney disease (PKD) is passed down through families (inherited), usually as an autosomal dominant trait. If one parent carries the gene, the children have a 50% chance of developing the disorder.

Autosomal dominant PKD occurs in both children and adults, but it is much more common in adults. Symptoms often do not appear until middle age. It affects nearly 1 in 1,000 Americans. The actual number may be more, because some people do not have symptoms.

An autosomal recessive form of PKD also exists. It appears in infancy or childhood. This form is much less common than autosomal dominant PKS, but it tends to be very serious and gets worse quickly. It can cause serious lung and liver disease, end-stage kidney disease, and it usually causes death in infancy or childhood.

Persons with PKD have many clusters of cysts in the kidneys. What exactly triggers the cysts to form is unknown.

PKD is associated with the following conditions:

- Aortic aneurysms
- Brain aneurysms
- Cysts in the liver, pancreas, and testes
- Diverticula of the colon

As many as half of people with PKD have cysts on the liver. A family history of PKD increases your risk for the condition.

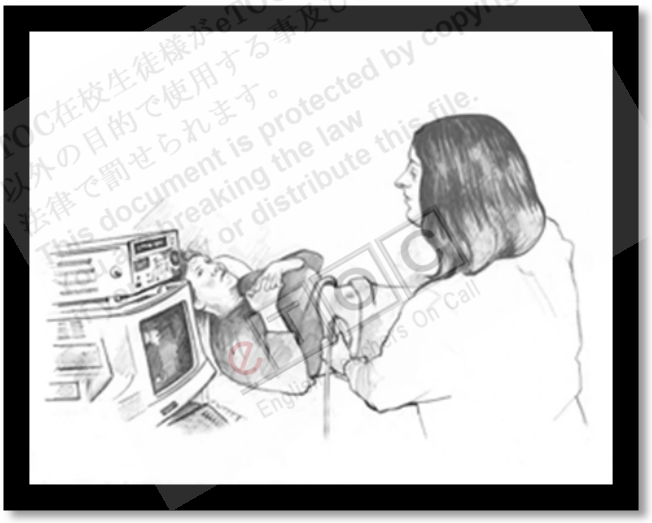
Symptoms

- Abdominal pain or tenderness
- Blood in the urine
- Excessive urination at night
- Flank pain on one or both sides

Other symptoms that may occur with this disease include:

- Drowsiness
- Joint pain
- Nail abnormalities

Exams and Tests



An ultrasound imaging device passes harmless sound waves through the body to detect possible kidney cysts.

An examination may show:

- Abdominal tenderness over the liver
- Enlarged liver
- Heart murmurs or other signs of aortic insufficiency or mitral insufficiency
- High blood pressure
- Growths in the kidneys or abdomen

Tests that may be done include:

- Cerebral angiography
- Complete blood count (CBC)
- Urinalysis

People with a personal or family history of PKD should be tested to determine if cerebral aneurysms are causing headaches.

Polycystic kidney disease and cysts on the liver or other organs may be found with the following tests:

- Abdominal CT scan
- Abdominal MRI scan
- Abdominal ultrasound
- Intravenous pyelogram (IVP)

If several members of your family have PKD, genetic tests can be done to determine whether you carry the PKD gene.

Treatment

The goal of treatment is to control symptoms and prevent complications. High blood pressure may be hard to control, but controlling it is the most important part of treatment.

Treatment may include:

- Blood pressure medicines
- Diuretics
- Low-salt diet

Any urinary tract infection should be treated quickly with antibiotics.

Cysts that are painful, infected, bleeding, or causing a blockage may need to be drained. There are usually too many cysts to make it practical to remove each cyst.

Surgery to remove one or both kidneys may be needed. Treatments for end-stage kidney disease may include dialysis or a kidney transplant.

Support Groups

You can often ease the stress of an illness by joining a support group where members share common experiences and problems.

See: Kidney disease - support group

Outlook (Prognosis)

The disease gets worse slowly. Eventually it leads to end-stage kidney failure. It is also associated with liver disease, including infection of liver cysts.

Medical treatment may relieve symptoms for many years.

People with PKD who don't have other diseases may be good candidates for a kidney transplant.

Possible Complications

- Anemia
- Bleeding or rupture of cysts
- Chronic kidney disease
- End-stage kidney disease
- High blood pressure
- Infection of liver cysts
- Kidney stones
- Liver failure (mild to severe)
- Repeated urinary tract infections

When to Contact a Medical Professional

Call your health care provider if:

- You have symptoms of PKD
- You have a family history of polycystic kidney disease or related disorders and you are planning to have children (you may want to have genetic counseling)

Prevention

Currently, no treatment can prevent the cysts from forming or enlarging.

Alternative Names

Cysts - kidneys; Kidney - polycystic; Autosomal dominant polycystic kidney disease; ADPKD

Reference:
http://www.nlm.nih.gov
http://kidney.niddk.nih.gov