Commentary

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A Brief Note on Polycystic Kidney Disease (PKD)

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Introduction

Clusters of cysts form largely within your kidneys as a result of polycystic kidney disease (PKD), a genetic ailment that over time causes your kidneys to expand and become less functional. Cysts are fluid-filled, spherical, non-cancerous sacs. The cysts can get quite big and come in a variety of sizes.[1] A hereditary condition in which kidney cyst clusters form. Cysts in polycystic kidney disease are non-cancerous sacs filled with fluid that resembles water. They are able to get extremely big. By the age of 60, renal failure affects many individuals with this illness.

Your liver and other organs may potentially develop cysts as a result of polycystic kidney disease. Serious side effects of the illness include renal failure and high blood pressure [2].

About the study

Symptoms

Symptoms of polycystic renal disease include:

- High blood pressure
- Back or side pain
- Blood in your urine
- A feeling of fullness in your abdomen
- Increased size of your abdomen due to enlarged kidneys
- Headaches
- Kidney stones
- Kidney failure
- Urinary tract or kidney infections

The two primary forms of polycystic kidney disease, each brought on by a unique genetic defect, are as follows [3]:

1. **Autosomal dominant polycystic kidney disease (ADPKD):** Usually between the ages of 30 and 40, ADPKD symptoms and signs start to appear. Children can acquire the illness, which was once known as adult polycystic kidney disease. The illness can be transmitted to the children by just one parent having it. Each child's likelihood of contracting ADPKD is 50% if one parent has the condition. Many cases of polycystic kidney disease take this form.

2. **Autosomal recessive polycystic kidney disease (ARPKD):** Compared to ADPKD, this kind is far less typical. Frequently, the warning signs and symptoms start soon after delivery. The first signs of a condition may not show up until later in childhood or throughout adolescence. To pass on this version of the disease, both parents must have

genetic abnormalities. Each child has a 25% risk of contracting the disease if both parents have the gene for it.

Complications

Polycystic kidney disease-related complications include [4]:

- **High blood pressure:** An often occurring side effect of polycystic kidney disease is elevated blood pressure. High blood pressure can exacerbate renal damage already present and raise your risk of heart disease and stroke if left untreated.
- **Loss of kidney function:** One of the most dangerous side effects of polycystic kidney disease is the progressive decrease of renal function. By the age of 60, kidney failure affects about half of people who have the condition. Your kidneys' capacity to prevent wastes from amassing to hazardous amounts, or uremia, can be compromised by PKD. End-stage kidney (renal) illness may develop as the condition progresses, demanding continual kidney dialysis or a transplant to extend your life.
- **Chronic pain:** A typical sign of polycystic kidney disease is pain. You frequently get it in your side or back. A tumor, a kidney stone, or infections are other possible causes of the discomfort.
- **Growth of cysts in the liver:** Aging raises the risk of hepatic cyst development in people with polycystic kidney disease. Cysts can occur in both men and women; however women are more likely to have bigger cysts. The growth of liver cysts may be influenced by female hormones and several pregnancies.
- **Development of an aneurysm in the brain:** Your brain's aneurysm, which resembles a balloon, has the potential to burst, resulting in bleeding (hemorrhage). Aneurysms are more likely to occur in people with polycystic kidney disease. The biggest risk group appears to be those with a family history of aneurysms. Find out from your doctor if screening is necessary in your situation. The screening check may be repeated in a few years or several years as a follow-up if it turns out you don't have an aneurysm. Your risk will determine when you should get a repeat screening.
- **Pregnancy complications:** Most women with polycystic kidney disease are able to become pregnant. Preeclampsia, a condition that can be fatal, can occasionally strike women. The most vulnerable individuals have high blood pressure or declining renal function before becoming pregnant.
- **Heart valve abnormalities:** Mitral valve prolapse can occur in up to 1 in 4 persons with polycystic kidney disease. As a result, blood might leak backward because the heart valve can no longer fully seal.
- **Colon problems:** People with polycystic kidney disease may experience weakness and pouches or sacs in the colon wall (diverticulosis).

Prevention

A genetic counselor can assist you in determining your risk of passing on polycystic kidney disease to your children if you have the condition and are thinking about becoming a parent [5].

Keeping your kidneys as healthy as you can may help stop some of this disease's effects. Controlling your blood pressure is one of the most crucial things you can do to save your kidneys.

Acknowledgement

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Conflict of interest

None

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