Research Paper Botany

Case Adult Polycystic Kidney Diseaseby Ultrasound

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ABSTRACT

Polycystic kidney disease (ADPKD) is the most common hereditary kidney disease, occurring in approximately 1 in every 400 to 1000 people.We report a case of a 60-year-old of Sudan origin. Presentedwith bilateral lion pain and hematurea. Transabdominal ultrasound shows bilaterally enlarged kidneys; with multiple cysts of various sizes demonstrate marked increased cortical echogenicity and loss of cortical-medullary distinction.

KEYWORDS polycystic kidney disease (PKD),,US

INTRODUCTION

Normally, the kidneys filter out excess toxic and waste substances and fluid from the blood. In people with polycystic kidney disease (PKD), the kidneys become enlarged with multiple cysts that interfere with normal kidney function. This can sometimes lead to kidney (renal) failure and the need for dialysis or kidney transplantation.

There are two major forms of PKD: autosomal dominant polycystic kidney disease and autosomal recessive polycystic kidney disease.

Autosomal dominant polycystic kidney disease (ADPKD) is the most common hereditary kidney disease, occurring in approximately 1 in every 400 to 1000 people. Autosomal dominant means that each child of an affected parent has a 50 percent chance of inheriting the disease. In addition, autosomal dominant means that it does not skip generations (ie, if a patient with the disease does not pass it along to one of his or her children, then the disease disappears from that family and grandchildren cannot inherit the disease). However, some patients with ADPKD are not diagnosed during their lifetimes due to very few symptoms. This means that a family member may have the disease without knowing it.

Autosomal recessive polycystic kidney disease (ARPKD) is uncommon and is typically diagnosed in infancy or in utero, although less severe forms may be diagnosed later in childhood or adolescence. The estimated incidence is approximately 1 in 20,000 people. Autosomal recessive means that the mutated gene must be present in both parents, who, because they carry one abnormal gene, are considered carriers. When both parents are carriers (each having one abnormal and one normal gene), then there is a 25 percent chance that each child will inherit an abnormal gene from both parents and have the disease.

CASE REPORT

We report a case of a 60-year-old of Sudan origin who was seen in the department of ultrasound in SHIFA AL-ALEEL HOSPITAL. Presentedwith bilateral lion pain and hematurea.No family history of similar condition. A careful ultrasound assessment led to the diagnosis adult polycystic kidney diseasewith feature of bilaterally enlarged kidneys; with multiple cysts of various sizes demonstrate marked increased cortical echogenicity and loss of cortical-medullary distinction.Also there is a simple hepatic cyst which associated with APKD.(FIG 1,2,3).

DISCUSSION

Screening for polycystic kidney disease in adults — An adult with a family history of PKD who has no symptoms may consider being screened for the disease. It is important to realize that, at present, there are no curative or preventative treatments for ADPKD. However, a number of novel treatments are being tested including increased fluid intake, which may have a beneficial effect on the rate of cyst growth and, therefore, kidney size. Importantly, being diagnosed with PKD could potentially affect a person›s ability to obtain life insurance. As in children, monitoring for high blood pressure should be performed regularly in adults at risk of having ADPKD.

Ultrasound — when screening is performed, an ultrasound of the kidneys is the most commonly used test. Imaging tests such as ultrasound can be used to screen for ADPKD. The following are ultrasound criteria used to diagnose ADPKD when it is unknown whether the affected parent has PKD1 or PKD2:

- In patients 15 to 39 years of age, at least three cysts (in one or two kidneys) must be seen with ultrasound
- In patients aged 40 to 59, at least two cysts must be seen in each kidney with ultrasound
- In patients over age 60, four or more cysts must be seen in each kidney with ultrasound

In someone older than 40 years, a negative ultrasound usually means that the person does **not** have ADPKD.

Sometimes, the affected parent is known to have either PKD1 or PKD2. If the parent has PKD2, then a negative imaging study (ie, no cysts in the kidneys) rules out the diagnosis if the person is older than 40 years. If the parent has PKD1, then a negative imaging study rules out the diagnosis if the person is older than 30 years.

As an example, assume a 35-year-old man has a parent with ADPKD, but it is not known whether the parent has PKD1 or PKD2. He undergoes screening ultrasound, which is normal. The normal ultrasound means that he does not have PKD1, but he could still have PKD2 since PKD2 is a more mild disease that may produce cysts later in life. However, people with PKD2 have a lower risk of kidney failure, compared with people who have PKD1, and typically develop kidney failure more than 20 years later than patients with PKD1. This news may be reassuring to some people.

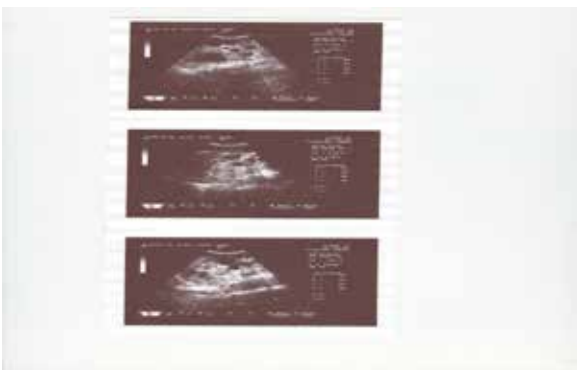

FIG (1) TAS showingLt Kidney

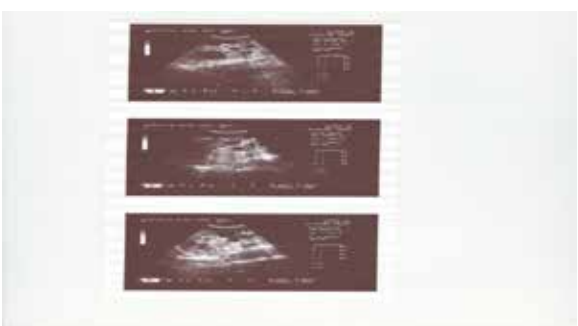

FIG (2) TAS showing Rt Kidney

FIG (3) TAS showing liver with simple hepatic cyst

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