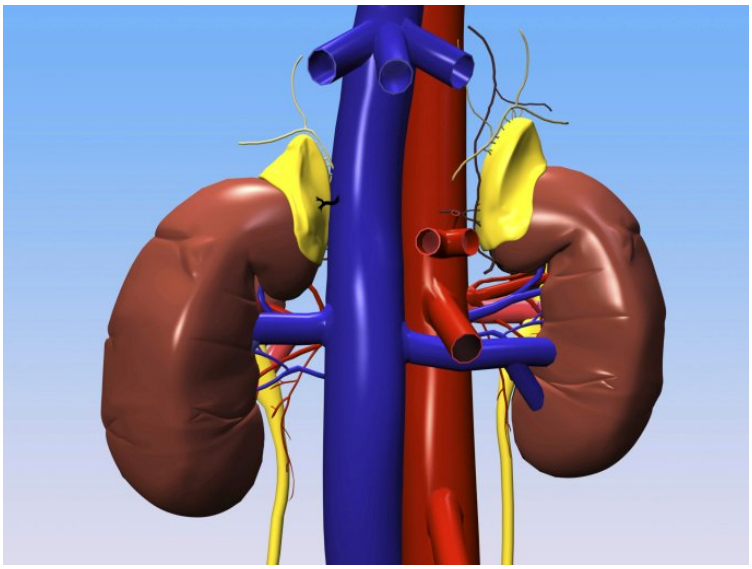
Renal artery stenosis



The narrowing of the artery that takes blood to the kidney is called renal artery stenosis. Generally, it is due to atherosclerosis, which is an accumulation of plaque formed by fat deposits on the artery wall. It can significantly reduce or completely block the supply of blood to the kidney. When blood and oxygen do not reach the kidney, the kidney cells cannot work normally or can die. This can lead to renal failure.
The kidneys regulate various body functions, including blood pressure. If less blood flows to the kidney because the artery is narrowed, the blood pressure within the kidney is lower than in the rest of the body. Normally, the kidney secretes hormones that regulate blood pressure by affecting the amount of salt and liquid that the kidney excretes. The hormones also affect the blood vessels in the rest of the body that regulate blood pressure. When blood pressure is low in the kidney, it secretes hormones that make the blood pressure increase until the pressure within the kidney seems to be normal. This process makes the blood pressure in the body too high. This is called secondary hypertension. Hypertension increases the risk of stroke and heart attack. Patients who have hypertension that suddenly becomes more difficult to control should be evaluated to see if they have renal artery stenosis. Older patients and smokers are at greater risk.

Symptoms
The most significant symptom of renal artery stenosis may be a sudden and rapid increase in blood pressure.

High blood pressure due to renal artery stenosis increases the risk of damaging the other "good" kidney if the artery that goes to that kidney is not blocked since the blood pressure in that kidney is too high.

Treatment

One treatment that the doctor may choose is a non-surgical method called "balloon angioplsaty." This procedure consists of stretching the artery with a balloon that is introduced into the artery with a catheter. Often a metallic tube called a "stent" is inserted into the artery once the artery has been opened with the balloon. The stent decreases the likelihood that the artery will become blocked again. In many cases, patients who have undergone this procedure improve their blood pressure control significantly. An additional benefit of this procedure is the possibility of reducing the need to use medications.