Atheroembolic Kidney Disease

*In **atheroembolic kidney disease**, numerous small pieces of fatty material (atheroemboli) travel from arteries above the kidneys to clog the smallest branches of the renal arteries, causing the kidneys to fail.*

- Usually atheroemboli occur as a complication of surgery or a procedure on an atherosclerotic aorta.
- Symptoms of kidney failure, blue toes, or a lacy purplish discoloration of the skin of the feet and legs may develop.
- Removing and analyzing a piece of kidney tissue (biopsy) may be done to confirm the diagnosis.

Tiny pieces of hard fatty material adhering to a hardened (atherosclerotic) blood vessel wall, usually the aorta, break off and travel through the bloodstream, becoming emboli (atheroemboli). Some emboli travel to the smallest renal arteries, blocking parts of the kidney's blood supply. Usually, this process affects both kidneys about equally and at the same time.

The fatty material may break off spontaneously when there is severe atherosclerosis of the aorta. It more commonly occurs as a complication of surgery or angioplasty or of imaging procedures that involve the aorta, such as arteriography, when pieces of fatty material adhering to the walls of the aorta are unintentionally broken off. Atheroembolic kidney disease is much more common in older people.

Symptoms

Atheroembolic kidney disease usually causes acute or slowly progressive failure of the kidneys. If the blockage of arteries results from a surgical or imaging procedure involving the aorta, the kidneys often fail suddenly. Urine production is often decreased.

As the duration and severity of kidney failure increase, various symptoms may appear, beginning with fatigue, nausea, loss of appetite, itching, and difficulty concentrating. The symptoms reflect disturbances in the muscles, brain and nerves, heart, digestive tract, and skin that result from kidney failure.

Atheroemboli may cause symptoms in other organs. If atheroemboli travel to the arms or legs, such symptoms as blue toes or a lacy purplish discoloration of the skin and even gangrene may result. Pieces of atheroemboli that travel to an eye may cause sudden blindness.

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Diagnosis

An imaging test may be done to exclude the possibility of renal artery blockage, which can sometimes cause similar symptoms. A kidney biopsy is the best way for doctors to make the diagnosis of atheroembolic kidney disease. A tissue sample examined with a microscope shows characteristic evidence of fatty material in the smallest arteries. Examination of skin or muscle specimens may also help to establish the diagnosis.

Prognosis and Treatment

In the past, people with atheroembolic kidney disease tended to die within weeks or months. However, more recently, treatment has improved. Most people live at least a year. About half live 4 years or more.

The treatment is to support the person as well as possible. For example, high blood pressure is treated. Dialysis may be needed during kidney failure, but sometimes the kidneys eventually resume functioning.

Reference:

http://www.merckmanuals.com