

**Hypersensitivity vasculitis** is often used to describe different types of vasculitis related to drug reactions, skin disorders or allergic vasculitis; however this is not always the correct use of the term.

Given the wide range of **symptoms**, the varying definitions and frequent incorrect use of the term, the American College of Rheumatology made a list of criteria for the classification of hypersensitivity vasculitis. Three or more of these criteria are needed to determine that a patient with some form of vasculitis is defined as specifically having hypersensitivity vasculitis. The criteria are:

- (1) older than 16 years of age
- (2) use of a drug before the development of symptoms
- (3) skin rash
- (4) biopsy of the skin rash that shows neutrophils, a type of white blood cells, around a small vessel

It should be noted that having three of these criteria does not always distinguish hypersensitivity vasculitis from other forms of vasculitis, particularly when the only or first symptom of vasculitis is a skin rash.

The presence of skin vasculitis, usually red spots, is the main symptom in hypersensitivity vasculitis. A biopsy of these skin spots reveals inflammation of the small blood vessels, called a leukocytoclastic vasculitis.

Hypersensitivity vasculitis may be caused by a specific drug or occur in association with an infection, but it may also be idiopathic, meaning there is no known cause. Although drugs are the most common cause, drug-induced vasculitis is a poorly defined disorder.

There are no symptoms or tests that prove hypersensitivity vasculitis results directly from a particular drug. The drugs that are most frequently listed as being associated with the development of hypersensitivity vasculitis include: penicillin, cephalosporin, sulfonamide, some medicines used to control blood pressure (loop and thiazide-type diuretics), phenytoin and allopurinol. Infections that may be associated with hypersensitivity vasculitis include hepatitis B or C virus, chronic infection with bacteria and HIV virus.

**Symptoms:** The major symptoms of hypersensitivity vasculitis, in addition to a skin rash, are joint pains and increasing size of lymph nodes. Lymph nodes are located in several places, but particularly along the neck, and supply special cells to the bloodstream that help remove bacteria from the body. In most patients, symptoms begin 7 to 10 days after the exposure to the drug or infection, but can be as short as two to seven days in some people.

Organ involvement in addition to the skin rash is very rare, but can be severe. Kidney inflammation and even more rarely liver, lung, heart and brain injury have occurred in patients with hypersensitivity vasculitis. The kidney inflammation is usually mild.

Symptoms of kidney involvement may not be noticed by the patient, but can be evaluated by a doctor by looking at a urine sample for small amounts of blood and protein. Kidney failure is not common, but can occur particularly with heavy or prolonged exposure to the suspected drug or infection. Kidney failure can be 'acute', meaning there is a fast loss of kidney function, but supportive treatment with dialysis (mechanical cleansing of the blood) can be done for a few days or weeks and kidney function returns. In some cases, 'chronic' kidney failure occurs,

meaning that there is an ongoing need for dialysis because the kidneys do not recover their normal function.

**Treatment:** If a drug may have caused the hypersensitivity vasculitis, then discontinuation of that specific drug usually leads to the disappearance of symptoms within a few days or weeks. If an infection may have caused the hypersensitivity, then treatment of the infection usually results in the disappearance of symptoms.

In some patients, especially those with ongoing infections such as hepatitis B or C, there may be ongoing or 'chronic' symptoms of hypersensitivity vasculitis. Drugs used to manage the skin rash and joint pains associated with hypersensitivity vasculitis might include corticosteroids and/or nonsteroidal anti-inflammatory drugs.

In patients with more severe or ongoing skin rashes that are not due to infection, drugs such as colchicine, antihistamines, and dapsone (or a combination of these drugs) may be helpful to control symptoms. Patients with disease in organs beyond the skin should be referred to a specialty doctor such as a nephrologist if the kidneys are involved.