

Giant cell (temporal) arteritis (GCA) is a vasculitis of large and medium size vessels. It may be generalized but vessel inflammation most frequently involves vessels in the scalp and head, especially the arteries over the temples. The disease is called temporal arteritis because the temporal arteries, which course along the sides of the head just in front of the ears (to the temples) often become inflamed. Women, Caucasians, and individuals over 50 years of age are most commonly affected by GCA.

The onset of the **symptoms** in GCA tends to be gradual and includes low grade fever, fatigue, weakness and weight loss. A new headache, mild or severe, occurs in at least two-thirds of patients with the pain tending to be located over the sides of the head in front of the ears but may be frontal or other located. Nearly one-half of patients suffer from pain in the jaw after chewing (called jaw claudication). Impaired vision is often an early manifestation of the disease. Permanent partial or complete loss of vision in one or both eyes has been observed in 15-20 % of patients. It is rare for patients to become completely blind in both eyes.

Polymyalgia rheumatica (PMR), which is characterized by pain in the shoulders and hips, is closely linked to GCA, occurring in about 40-50 % of patients.

A **laboratory** abnormality seen in most patients with GCA is a very high erythrocyte sedimentation rate (ESR). The ESR measures how fast a patient's red blood cells settle when placed in a small tube. Anemia or low red blood cell count and microscopic hematuria (blood in the urine) may be found but renal (kidney) impairment is unlikely to be due to GCA. Other tests are occasionally abnormal with non specific meaning.

Temporal artery biopsy is suggested in all cases of suspected GCA. Even though the diagnosis may appear "classic" a temporal artery biopsy is still recommended. The biopsy is of low risk, causes very little pain, and often leaves little or no scar. After the use of a topical numbing medication (the same one used by a dentist), the doctor can remove a small part of the temporal artery from under the scalp in order to examine it under the microscope.

Other ways to diagnose GCA include: ultrasonography, angiographic examination, computerized topographic scanning and magnetic resonance angiography, high resolution magnetic resonance imaging and position emission tomography (PET).

Glucocorticoid **treatment** should be instituted once the diagnosis of GCA is established.

Glucocorticoids have inhibitory effects on a broad range of specific immune responses. Their effectiveness in GCA is well established by years of use. Daily dosing is more effective than alternate day dosing. This response usually occurs within two to four weeks after the institution of therapy. The diagnosis should be reevaluated in patients who are resistant to adequate steroid therapy. Steroid withdrawal can begin once clinical remission has been induced. Relapses are seen more frequently in the first year or two of the disease.

Adverse effects of corticosteroids are glucose intolerance or frank diabetes mellitus (condition of abnormal glucose levels in blood) and infections. Patients should be aware and watchful so as to report symptoms suggestive of diabetes or infection. Use of glucocorticoids may also predispose to, or worsen preexisting, osteoporosis (abnormal bone density condition) especially in postmenopausal women and older men. Use of calcium supplements, vitamin D, hormone replacement therapy and/or bisphosphonates are can be helpful in preventing bone mineral loss.

Relapses often necessitate increased dosage or prolonged steroid treatment. Some researchers have suggested that the addition of methotrexate may be steroid-sparing while others have not demonstrated any benefit. However the routine addition of methotrexate to glucocorticoid therapy for GCA is not recommended. The efficacy of other cytotoxic drugs, dapsone, antimalarials, etanercept, and penicillamine has not been studied adequately although they have been reported to be helpful in some case reports.

The **finding** of an increased risk of visual loss in patients with GCA and thrombocytosis (increase of the number of platelets in the blood), has led some to suggest the addition of drugs like aspirin for patients with high platelet counts, but there is not a lot of data to prove that this may reduce brain/skull problems.