

Brachial neuritis

The **brachial plexus** is a group of nerves that travel from the upper spine to the shoulder, arm, and hand. There are two brachial plexi: one for the left arm and one for the right arm. These nerves help control the shoulder, arm, and hand muscles. The brachial plexus also transmits sensation from the skin in these areas back to the brain. Damage to the brachial plexus causes problems with pain and loss of function of the shoulder, arm, and/or hand muscles. This can be caused by an external injury such as in babies who have a difficult birth. Sometimes the brachial plexus becomes damaged without any external injury: this is called **acute brachial neuritis**.

Symptoms

Patients with acute brachial neuritis typically complain of very severe pain affecting the shoulder or upper arm. This pain usually lasts from a few days up to a few weeks. Patients then develop weakness of the shoulder and/or upper arm. Numbness or tingling in the shoulder and/or arm can also develop. The muscles in the affected shoulder and arm may shrink in size as well (this is called 'wasting'). Occasionally both arms are affected but in this case it is usual for one side to be much worse than the other side.

Causes

We do not know the cause of brachial neuritis. Some people think it may be a disease of the immune system but there is very little evidence as to the exact cause at this time.

Brachial neuritis is more common in young and middle-aged men but it is unclear why this is.

Tests

If a patient has a clear story that sounds like the description of the symptoms given above then this is a strong clue that the diagnosis is brachial neuritis.

Examination by an experienced doctor may allow a clinical diagnosis to be made without any further tests.

The most common and important confirmatory test is an electrical test of the nerves and muscles carried out by a clinical neurophysiologist. A clinical neurophysiologist is usually a doctor who will test the speed of conduction of the nerves (nerve conduction studies) and look at the muscle activity electrically (electromyography). In addition a scan of the spine may be carried out.

Treatment

Brachial neuritis usually improves over time. About 33% of patients make a full recovery after 1 year, and 75% of patients are better after 2 years. Recovery is helped with physiotherapy using particular exercises: these can be done at home during the recovery phase.

A recent study suggested that steroid tablets (Prednisolone) may help speed up the recovery process. However, the research to support this advice is fairly weak and there may be lots of side-effects from long-term use of steroids. Your doctor will be able to go through the advantages and disadvantages of steroids with you.

During the very painful early stages of this disease it is important to get good pain relief. Patients may need very strong pain-killers to control the pain. Your doctor will be able to prescribe the appropriate medications.