

CAROTID ARTERY DISEASE AND THE PREVENTION OF STROKE

Introduction.

Stroke is a common and devastating condition, which can be fatal or result in permanent disability. There are several causes but the commonest is a clot blocking an artery in the brain. The blood flow through this artery is required to supply oxygen to the surrounding brain and without this the brain is damaged (infarction). Once a stroke has occurred urgent specialised medical care can limit the extent of damage but fully reversing the injury is frequently not possible. It is better therefore to try and prevent stroke occurring whenever possible. As with other vascular diseases we know several risk factors for stroke:- high blood pressure; smoking; raised cholesterol; irregular heart beat (fibrillation). If there is a concern about the risk of stroke then it is important to STOP SMOKING and have the other risk factors treated. A low dose of aspirin taken once each day is also beneficial.

Carotid Artery Disease.

The clot blocking the artery in the brain causing a stroke often starts in the carotid artery in the neck. From here it breaks off into the flowing bloodstream and passes into the brain (embolus). Many of these clots are small and may cause “mini-strokes” or temporary loss of vision. Thus there may be a brief period where an arm becomes weak, the face muscles may be weak on one side, speech may be difficult, and the vision may be lost in one eye. These symptoms often resolve over 24 hours but may recur. These are called TIA's and they are a warning sign that a more significant stroke may occur without treatment. The risk factors above should be treated but in addition the carotid arteries in the neck should be investigated. The easiest way to do this is with an ultrasound scan. This is painless and harmless and can detect significant narrowing of the internal carotid artery, which is a major artery to the brain.

Carotid Endarterectomy.

If you have a TIA and a scan shows a significant stenosis of the carotid artery then you are at risk of a major stroke (11% over 2 years). Careful studies have shown that this risk can be reduced to 6% by surgery. The operation is called a CAROTID ENDARTERECTOMY. The disease in the artery is removed restoring a smooth surface and so preventing further clots (emboli). The procedure involves a cut in the neck, takes 2 hours on average to perform, and usually necessitates 1-2 days in hospital. It is possible to have the operation done under local or general anaesthesia. The major risk of the operation is that it will cause a stroke. This occurs in only 2-3% of cases and strenuous efforts are made to prevent this by careful surgery and monitoring. Despite the risk of the operation the overall benefit favours surgery if there is a significant stenosis. Other more minor complications include numbness around the wound, and disturbance of nerves to the tongue and throat. There are no age limits for the operation providing there is no severe problems with heart disease.