

# IN THE EVENT OF ACUTE STROKE (BRAIN ATTACK)

**In this second article I will explain some of the treatments given, diagnostic methods and the pathway to recovery.**

This is an acute medical emergency, hence the title describing it as a brain attack. The patient will be transferred to hospital immediately for treatment and will be seen by the medical team and assessed by the stroke physician. The priorities of the medical team are:

- To confirm the diagnosis of stroke
- Establish the underlying cause
- Give urgent treatment

This is only the start of the process of care as the clinical management then proceeds to specialist supervision during the acute phase with close monitoring of vital functions and protection against early complications. Then starts the process of putting the stroke patient on the pathway to recovery.

## On Admission

A detailed medical history is taken to establish the time of onset of the stroke, present and past symptoms, history of other medical conditions such as diabetes, hypertension, heart attacks or previous strokes, family history of related conditions and current medication taken.

Additional details may be required from family, friends and the GP as the patient may not be able to provide all the information needed. Careful clinical examination then takes place.

## Investigations

Outlined below are some of the tests that may be carried out – this list is not exhaustive.

## Blood tests

Full blood count, coagulation tests that measure the time the blood takes to clot,

chemistry tests to measure blood glucose (sugar) levels and the levels of certain chemical ingredients in the blood. This gives the doctors information on the levels of sodium, potassium, kidney function, liver function and hydration. Blood lipid levels (cholesterol) are also checked.

## Brian imaging

A brain CT scan gives a clear image of the brain and may be done on arrival at hospital after medical examination and blood samples are taken. It will show brain structures and reveal the presence of any abnormalities. A very recent stroke or a very small one may not show on the initial scan but even then the information gained is crucial in deciding what treatment to give.

Later on other imaging tests such as an MRI scan may be used. This identifies differences in the soft tissues of the brain and is increasingly used in Stroke Units at early stages of management.

## Other tests

A range of other tests may be carried out including an electrocardiogram to check heart rhythm where the pattern may show acute abnormalities.

## Medications Used

It is important to note that the information given below is not intended to advise patients on what medication they will have, but is an indicator of the range of drugs that may be used. The decision on specific drugs is the responsibility of the medical team.

## Thrombolytic Therapy (Clot Busting)

80% of strokes are due to a blockage of an artery supplying the brain. This is caused by a clot (thrombus). The principle of this treatment is that if the clot is broken quickly then the blood flow could be restored. Extensive studies have shown that this treatment is relatively safe, but it has to be given within three hours of the stroke, therefore it is essential to note the time of onset of symptoms. There is a strict protocol in patient selection and administration of this type of drug.

## Antiplatelet Drugs

Platelets are a type of blood cell that form part of the blood clot through their ability to stick together forming a plug thus stopping bleeding. Using antiplatelet drugs makes it less likely for blood clots to form. The choice of these drugs depends on patient condition and tolerance.

Other drugs are given such as statins to lower cholesterol and drugs to prevent deep venous thrombosis in the acute stages.

## Pathway to Recovery

Many stroke patients will have difficulty performing tasks on their own that we take for granted, such as walking, dressing and toileting. Some, in the initial assessment will have difficulty swallowing. The Rehabilitation Team (Physiotherapist, Occupational therapist, Speech therapist, Social worker, and Clinical psychologist) in the hospital assess the abilities of each patient and set specific goals and treatment plans. These goals are decided with the patient; have to be realistic depending on the severity of the stroke; and aimed for in the daily exercises and training in order to achieve the maximum independence possible.

Patients are often very tired in the early stages and the introduction to rehabilitation must take this into account. Involvement of family members is invaluable as they provide encouragement and support.

The team works together and meets regularly to redefine goals. The patient and family are fully involved and well informed of the recovery plans.

The discharge planning process involves all members of the team, the patient and carers. Any equipment needed has to be in place prior to discharge as well as plans for follow up and community rehabilitation.

The medical team and Unit Pharmacist ensure that the patient is provided with the necessary medication to take out of hospital on discharge and the patient's GP is sent a report including all the relevant details, the medication given, services provided and follow up plans.

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