Who is the leaflet for? What is its aim?

This leaflet is aimed at parents or relatives of babies affected by perinatal stroke. The aim is to explain what perinatal stroke is, how it presents and how healthcare is organised for babies affected by stroke.

What is perinatal stroke?

Stroke is a sudden disturbance of blood supply to a part of the brain caused by a block (ischaemic stroke) or break (haemorrhagic stroke) in a blood vessel. This causes the affected area of the brain to suffer from a period of lack of blood flow and oxygen. The absence of blood flow for an extended period of time can permanently damage the cells and affect their function. When the stroke occurs in the last part of the pregnancy or in the first few weeks of life, it is called perinatal stroke.

Is perinatal stroke common?

Although stroke is commonly thought to affect mainly people in old age, this is unfortunately not the case. A term newborn has a risk of 1 in 3,500 to have a stroke. Stroke is more common in term babies, but it can also affect premature babies.
What causes perinatal stroke?

One of the most common causes of perinatal stroke is a blood clot that obstructs flow in a blood vessel in the brain. However, the reason why the blood clot forms is usually not clear. Very rarely there may be an underlying disorder of the clotting system causing the stroke and your doctor may decide to test for it. However, more commonly it is believed to be a clot formed in the placenta that enters the baby’s circulation and blocks a brain vessel.

Research in the field suggests that infections in mother or baby, complicated pregnancies or traumatic deliveries, cardiac problems in babies and placental disorders are contributing risk factors. However, in many cases babies with perinatal stroke are otherwise healthy, born after an uncomplicated pregnancy and the cause for stroke is not found.

What are the signs suggesting your baby had a perinatal stroke?

Most babies with perinatal stroke (nearly 90%) present with symptoms in their first week of life. Occasionally, a diagnosis is made at a later stage in childhood.

Most commonly perinatal stroke will present with seizures in the first few days of life. The seizures may involve only a part of the body, or the whole body. Babies with perinatal stroke can also be floppy, weak, sleepy or have breathing or feeding difficulties. Finally, they may also have unusual movements.
How is perinatal stroke diagnosed?

If your baby shows signs of a perinatal stroke, doctors will place sensors on their head to measure the electrical activity of the brain (EEG and aEEG). They will also perform an ultrasound scan of the brain by placing an ultrasound probe on the soft spot on the head. However, the ultrasound appearances in perinatal stroke can often look normal, so to confirm the diagnosis, an MRI scan will be performed. Expert radiologists will then review the MRI images and produce a formal report. MRI scans are safe for babies, as they don’t involve dangerous radiations.

How do we take care of babies affected by a perinatal stroke?

Babies with perinatal stroke are cared for on the neonatal unit. The care on the neonatal unit will be tailored to your baby’s needs. If your baby has seizures, medications may be required to stop them. Seizures usually settle after a few days. Often babies with perinatal stroke can have problems with feeding and feeding through a naso-gastric tube may be needed for some time.

After discharge from the neonatal unit, you will have regular follow up appointments with your paediatrician. Development will be monitored here, and you will be able to discuss any problems you encounter. Some babies may need help and support from other healthcare professionals like physiotherapists and speech and language therapists.
What does this mean for my baby’s future?

Babies who suffer from perinatal stroke are at risk of developing neurological problems later in life, like difficulties with movements or walking (sometimes called cerebral palsy), problems with learning or speaking (cognitive problems) or seizures (epilepsy). These problems may become more obvious with delays in reaching developmental milestones (such as first step or first word). However, it’s very hard to predict the type and extent of difficulties for each child. This will not only depend on the area and the size of the perinatal stroke, but also on how the rest of the brain adapts and compensates. This is why doctors can do some prediction based on the results of the scan, but ultimately each baby is unique, and the extent of the problem becomes clear only with time. Your health visitor, your GP and your paediatrician will be there to support you in this journey.

Useful organisations

www.childbraininjurytrust.org.uk
Charity that supports families with children affected by acquired brain injury

www.stroke.org.uk
Stroke association with a section of the website dedicated to childhood stroke
References

- Kirton A et al; Pediatrics. 2011 Dec;128(6):e1402-10
- Kirton A et al; Stroke. 2013 Nov;44(11):3265-71

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