

Intraventricular Haemorrhage

What is Intraventricular Haemorrhage?

Intraventricular haemorrhage (IVH) means bleeding (*haemorrhage*) into (*intra*) the normal fluid spaces (*ventricles*) within the brain.

Why does it occur?

All babies have tiny blood vessels close to the ventricles of the brain. These are fragile and can easily burst, causing bleeding. This bleeding can occur on one or both sides of the brain.

Which babies are at risk of developing IVH?

IVH almost always occurs in premature babies. It tends to happen most commonly in the smallest and sickest babies, those born before 28 weeks of pregnancy or weighing below 1000 grams (2 lb 4oz). This is because these babies have the most fragile blood vessels that can bleed very easily.

How is IVH diagnosed?

Babies often have few outward signs that can tell doctors and nurses looking after them that an IVH has occurred. Therefore we have to do a brain scan to diagnose whether or not a baby has developed an IVH.

All premature babies will have at least one brain scan performed to look for IVH and this is usually performed within the first few days after birth. This scan is called a Cranial Ultrasound Scan (or “head scan”) and uses sound waves to get a picture of the baby’s brain through the “soft spot” at the top of the skull. This is identical to the sort of scan most mothers have at about 20 weeks of their pregnancy and does not cause any pain or discomfort to the baby. Head scans are performed either by one of the doctors caring for your baby or by a sonographer – a person skilled in performing ultrasound scans.

The head scan not only diagnoses whether an IVH is present, but also gives doctors useful information about the extent of the bleeding that has occurred.

Can IVHs be prevented?

A pregnant mother who may deliver her baby prematurely is sometimes given steroid injections. These medicines are used to make a baby’s lungs more mature but can also reduce the risk of the baby developing an IVH. Unfortunately there is not always enough time for steroids to be given to a mother before her baby is delivered. Nevertheless, all premature babies who are born weighing less than 1250 grams are given a medicine called Indomethacin soon after birth, at 24 hours and 48 hours of age. This has been shown to help prevent IVH.

What does an IVH mean for my baby?

The outlook for a baby with IVH will depend on the amount of bleeding that has occurred and whether any complications have devolved after the bleeding has occurred. A small amount of bleeding is very common in premature babies and very few babies born before 28 weeks have no bleeding at all. This mildest form of IVH is not itself a problem and there will be no complications from it.

Other babies will have more bleeding and therefore a higher risk of developing complications. Regular ultrasound scans and measurements of a baby's head size will allow the doctors to find out whether or not the bleeding has caused any problems.

What are the complications that may develop after an IVH?

The fluid that is continuously produced inside the ventricles normally drains out of the brain and is then absorbed into the circulation. Sometimes the blood inside the ventricles clogs up the drainage system, causing a build up of fluid. This may make the ventricles swell up. If this does not settle by itself, it can cause a build up of pressure inside the skull. This is called *hydrocephalus* and will need to be treated to reduce the risk of any brain damage from occurring.

Even without this sort of swelling of the ventricles, babies who have had a severe haemorrhage (a large IVH) can develop problems later on in childhood. All babies born prematurely have regular check-ups in Outpatient Clinic with one of the Neonatal Consultants. Babies who have had a large IVH will need to be checked particularly carefully for signs of any problems. These problems may show themselves as delayed development (where a child appears to be developing at a slower rate than other children of a similar age) or as problems with nerves and muscles (eg. weakness or stiffness of the limbs).

Is there any treatment for IVH?

Unfortunately there is no specific treatment (either with medicines or surgery) that has been shown to help babies once they have developed an IVH. All babies will continue to get the same care and support that all premature babies receive on the neonatal unit. Some babies may need a blood transfusion to replace the blood lost during the IVH and to prevent anaemia.

Where can I find out more about IVH and its complication?

The nurses and doctors looking after your baby will be able to tell you more about IVH and its complications. There is also information on the Internet at these sites:

PARENTS OR PREEMIES

http://www.pediatrics.wisc.edu/childrenshosp/parents_of_preemies/ivh.html

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