Retinopathy of Prematurity (ROP)

Retinopathy of prematurity (ROP) is a potentially blinding eye disorder that primarily affects premature infants weighing 1250 grams or less that are born before 30 weeks gestation.

ROP has been recognised as an important cause of childhood visual impairment and blindness.

If your baby has been examined by a specialist at Auckland City Hospital the findings and the need for treatment will have been discussed with you.

Why is ROP screening important?
If severe ROP is present it needs to be treated quickly to prevent further damage. This will usually be within 48 hours of being diagnosed but may be a little longer depending on the severity. Treatment can be given and potential visual loss can be prevented.

How do we screen for Retinopathy of Prematurity?
All babies in NICU who are born before 30 weeks gestation, or below 1250 grams birth weight, or any babies who may have been sick, or are thought to be at higher risk of developing ROP are scheduled for eye exams.

The initial exam is at 4 – 6 weeks after birth, or between 31 – 33 weeks gestational age.

Staff nurses in NICU will administer anaesthetic and pupil dilating eye drops to each eye prior to the examination, usually at 0800 on a Tuesday morning, sucrose for analgesia may also be given orally during the exam.

A special camera, called a Ret Cam, is used to photograph the eye; this is done by a qualified ROP screening nurse and a medical photographer. The ophthalmologist will assess the photos and grade the severity of ROP.
What happens if the baby is transferred to another hospital or discharged?
A detailed transfer letter including the ROP screening report and follow up arrangements will be sent to the other hospital, so that ongoing screening can be performed. All babies screened for ROP will have a 6 month follow up examination at the ophthalmology clinic Greenlane Clinical Centre.

Where can I find out more about Retinopathy of Prematurity?
The nurses and doctors caring for your baby will be able to answer any questions that you may have and the ophthalmologist is also available.

How and when is ROP treated?
In severe ROP the blood vessels in the back of the retina are dilated, this is treated by using a laser which reduces the chances of any further abnormal blood vessels developing. This treatment will be carried out by an ophthalmologist.

The aim of treatment is to reduce the incidence of retinal detachment and blindness.

This procedure will be explained and you will have the opportunity to ask the ophthalmologist any questions before treatment.

Sometimes an alternative to laser is used; this is called Avastin and is an intravitreal injection.

What is likely to happen if your baby requires treatment?
The staff in NICU will prepare your baby for the laser treatment and a neonatal nurse will stay with your baby throughout the procedure.

For safety reasons your baby will be moved to a darkened single room. Your baby will be nil by mouth for 4 hours prior to the procedure and an intravenous infusion will be started to supply fluid and glucose. The procedure usually takes 1 – 2 hours.

The room is closed to all visitors and staff members not looking after the baby, a sign will be placed on the door indicating that a laser procedure is in progress, the doors and windows are shielded to prevent the laser ray from exiting the room.

During the procedure your baby will be sedated and breathing will be supported by a ventilator, (your baby may remain on the ventilator for a period of time after the procedure sometimes between 12 and 24 hours). There will be complete monitoring of your baby during the procedure. Your baby will have an eye shade on for 12 hours after the procedure.

All staff in the room must wear protective goggles throughout the procedure.

What will happen after treatment?
Your baby’s eyes will look red and swollen, but this will settle within 24 – 48 hours. Your baby will have an antibiotic eye ointment for 3 days after the procedure.
In most babies one treatment is effective but sometimes a second treatment will be required 2 – 3 weeks later.

**Will my baby’s vision be affected?**
Studies have shown that early treatment gives good results and 50 – 80% of treated babies have good or very good eyesight.

**Are there any long term effects of ROP?**
Approximately 20% of all premature babies will develop a squint or become short sighted by the time they are 3 years of age. This is why follow up is important.

Premature babies, (especially those with ROP) more commonly need to wear glasses in early childhood. The ophthalmologist will arrange to check your baby’s eyes at regular intervals as she/he grows up.

This leaflet provides a guide only. If you have concerns or want more information about your baby, ask the doctor or nurse providing your baby’s care.