CARE PLAN FOR LASER EYE SURGERY

Patients with grade 3 disease may require treatment and those with “Plus Disease” or rapidly progressing disease will require treatment. Cryotherapy and laser therapy are the two types of treatment available. Laser therapy is considered more effective, less time consuming and less painful than cryotherapy. The endpoint of Retinopathy of Prematurity is scar tissue formation causing retinal traction resulting in visual disturbance and detachment. Scar tissue formation is triggered by proliferating retinal vessels. The aim of laser therapy is to arrest abnormal vessel proliferation by lasering the adjacent retina. Treatment requires a high degree of skill and it should be the aim of the UNIT staff to optimise conditions for the procedure in order to allow its safe and effective completion.

Preparation for Laser Therapy:

1. Once the opthalmologist has decided to proceed to surgery the parents need to be fully informed and written consent gained by the surgeon.
2. A date and time convenient for the ophthalmologist and UNIT team should be set. Parents, the Nurse and Consultant In-Charge of Nursery 1, the Transport Team and Technician should all be informed of the date and time.
3. Check FBC, U&Es and clotting profile
4. Organise the Equipment

Open Incubator (height adjustable)
2 Size G Air cylinders
2 Size G Oxygen cylinders
Ventilator
Overhead Heater
Supports to help position baby’s head
Light source
Safety goggles (provided by Ophthalmology team)
Safety signs

The Equipment Room on UNIT is used for the procedure. Goggles must be available for all staff required to stay in the room. No entry signs should be placed on the door notifying others of the laser procedure.

Preparation on the Day of Surgery

Transport Team and technician will check all equipment is functioning well.
Check the equipment room is as clear as possible with space for the open incubator, ventilator, laser equipment and staff.
Ensure that equipment room is warm.
Stop oral feeds 4 hours prior to intubation and ventilation

No later than 4 hours prior to the procedure:

Bring baby into Nursery 1 and check identity
Confirm that consent has been signed.
Ensure baby is fit for procedure and check blood results.
Gain two reliable IV accesses
Electively intubate as per protocol and ventilate.
Continue with morphine infusion and paralysis (Pancuronium boluses or Vecuronium infusion as per Pharmacy Guidelines)
Stabilise baby on ventilator
Check blood gases and glucose
Secure ETT well and check position with a CXR
Check blood pressure
Monitor heart rate and saturations
Start maintenance IV fluids

During the Procedure:

Check patient identity prior to starting treatment
Plug equipment into room power supply, keep baby warm
Continue monitoring and check IV infusions are running
Position the baby's head as requested by the ophthalmologist.
Ensure all staff are wearing goggles and no entry signs are placed on the door
During any change in the ventilator gas supply, the ophthalmologist must be asked to stop the procedure, the baby should then have bag ET ventilation until gas supply restored to the ventilator.
Ensure adequate pain control and paralysis throughout

Stop the procedure if you have doubts about the baby's wellbeing

Staff needed in the room during procedure
Transport Team: Nurse, Registrar +/- Consultant
Ophthalmology Team: Consultant and Registrar.
Unit Technician

Post operative procedure:

Stop paralysing agents
Wean morphine infusion as tolerated.
Commence steroid eye drops as indicated by Ophthalmology Team.
Wean ventilation and extubate as soon as clinically indicated.
Restart feeds when stable off ventilator.
Ensure ophthalmology follow-up arranged.