

Department of Ophthalmology

Paediatric Ophthalmology

(Also incorporating the Departments of Plastic Surgery, Dermatology, Ear Nose and Throat (ENT) & Paediatric Cardiology)

Propranolol for the treatment of paediatric haemangiomas

Parent Information

Who is the leaflet for? What is its aim?

This leaflet has been developed to provide advice and information to parents and carers administering propranolol to infants in order to reduce the appearance of his/her haemangioma.

What is a haemangioma?

Haemangiomas are soft tissue growths connected to the circulatory system and filled with blood. Their appearance depends on location. If they are on the surface of the skin they look like a ripe strawberry, if they are just under the skin they present as a bluish swelling. Sometimes they grow in internal organs such as the liver or larynx (airway).

How did my child get a haemangioma?

They are formed during pregnancy and most commonly they are not present at birth, but appear during the first few weeks of life. They are often misdiagnosed, initially, as a scratch or bruise, but the diagnosis becomes obvious with further growth. Sometimes they present as a flat red or pink area.

What is propranolol?

Propranolol is a type of medication that is used to treat high blood pressure in adults. Though its use to treat the haemangiomas of children is relatively new, it has been used to treat children with cardiac conditions for a long time.

Benefits

These will vary depending upon where on your child's body their haemangioma is. However, generally speaking, the main benefit your child will experience from taking this medication is to reduce the size of their haemangioma.

Is it safe?

All possible risks will be explained to you in detail prior to your child commencing propranolol therapy. They include (in order of frequency):

- Bradycardia (low pulse rate)
- Hypotension (low blood pressure)
- Bronchospasm (a constriction, or spasm, of the tissue in the lungs)
- Hypoglycaemia (low blood sugar level)
- Cardiac conduction disorder (an altered pattern in the way the heart works)
- Peripheral vasoconstriction (narrowing of the blood vessels in limbs; which may mean that your child's hands and feet feel cold)
- Weakness and fatigue
- Sleep disturbance

Alternatives

Please discuss any concerns that you have regarding this topic with the medical team at your child's next consultation.

What happens next?

Preparation before commencing treatment

Following referral for treatment by your child's consultant, arrangements will be made for your child to be reviewed by a paediatric cardiologist in Clinic 6.

After the decision has been made, in conjunction with yourself, to start a propranolol treatment regime arrangements will be made for your child to be admitted to Ward C3 (a children's ward) to commence their medication.

The propranolol medication is administered to your child orally in a suspension form (like Calpol).

It is necessary for your child to be admitted to hospital for the first day of treatment and for a day, around a week later, when the dose is doubled. In between these two admissions; and for all subsequent dose increases, you administer the medication your self at home.

Admission to hospital is necessary when commencing propranolol so that your child's wellbeing can be closely monitored by a nursing and medical team. You should expect your child to be in hospital for the first twenty-four hours following the initial dose of propranolol. There is a single fold away bed by each child's bed space, so it will be possible for one adult to stay with their child at all times.

Arrangements will then be made for your child to be admitted to ward F3, as a day case, for review and for the propranolol dose to be increased, whilst he/she is once more under observation.

You are, of course, free to come and go as you like. However, we do encourage you to be present with your child through out their two admissions.

Investigations prior to the commencement of medication will involve recording your child's weight, blood pressure, a physical examination, a photograph of your child's haemangioma, blood tests and an echocardiogram (a scan of your child's heart to assess its structure and function). These may be conducted either on the day of, or during the week before, admission.

How long will my child need this medication for?

Treatment regime

Week one: A dose of 1mg per kilogram of your child's body weight per day divided into three doses (a 6 kilogram child would receive a dose of 2mg three times a day).

Week two: The dose will be increased to 2mg per kilogram of your child's body weight per day divided into three doses.
This increase in dose will take place following an assessment to ensure compliance and tolerance of treatment.

Ongoing: The propranolol dose will be increased in line with your child's weight gain at subsequent clinic visits.
The duration of treatment will be determined by your child's referring consultant and will usually be continued for six to nine months depending on response.

Follow-up care

During your child's second admission (for the dose increase), prior to your discharge home, an out-patient appointment in Clinic 6 will be arranged for your child to be seen by a paediatric cardiologist four to six weeks after commencing treatment.

Long term follow-up will be provided by the referring consultant, (dermatology, plastics, ENT or ophthalmology) to assess your child's haemangioma's response to treatment.

You may be asked to sign consent forms for clinical photographs to be taken of your child's haemangioma, at several stages through out your child's treatment, as deemed necessary by your child's consultant. This is so that an accurate record of your child's treatment and their response to the propranolol can be made.

Stopping treatment

Your child's propranolol medication will not be stopped on one go. Instead, the dose of propranolol that your child receives will be gradually reduced over two weeks by your consultant halving the dose every week.

Contacts/Further information

If you have any concerns relating to your child's immediate health please contact your general practitioner. Alternatively, if the matter is a query relating to your child's diagnosis and is non urgent, please be sure to ask your questions at your next outpatient appointment, or, contact one of the following:

Clinical Nurse Specialist
for Paediatric Ophthalmology,
Department of Ophthalmology,
Clinic 3, Box 41,
Addenbrooke's Hospital,
Cambridge University Hospitals NHS
Foundation Trust,
Hills Road, Cambridge, CB2 0QQ
Tel: (01223) 596414
Bleep: 156 - 2251 (via Addenbrooke's
Switchboard = 01223 245151)

Consultant Neonatologist/ Paediatric
Cardiologist,
Neonatal Intensive Care Unit, Box
226,
Addenbrooke's Hospital,
Cambridge University Hospitals NHS
Foundation Trust,
Hills Road, Cambridge, CB2 0QQ
Direct line: (01223) 217675
Neonatal Secretary: (01223) 216240
Cardiac Secretary: (01223) 217985

Consultant Paediatric Ophthalmologist,
Department of Ophthalmology,
Clinic 3, Box 41,
Addenbrooke's Hospital,
Cambridge University Hospitals NHS
Foundation Trust,
Hills Road, Cambridge, CB2 0QQ
Secretary: (01223) 216700

Consultant Paediatric Dermatologist,
Department of Dermatology,
Clinic 7, Box 46,
Addenbrooke's Hospital,
Cambridge University Hospitals NHS
Foundation Trust,
Hills Road, Cambridge, CB2 0QQ
Secretary: (01223) 216501

Consultant Paediatric Ear, Nose and
Throat Surgeon,
Department of ENT,
Clinic 10, Box 48,
Addenbrooke's Hospital,
Cambridge University Hospitals NHS
Foundation Trust,
Hills Road, Cambridge, CB2 0QQ
Secretary: (01223) 216486

Consultant Plastic Surgeon,
Department of Plastic and
Reconstructive Surgery,
Clinic 7, Box 46,
Addenbrooke's Hospital,
Cambridge University Hospitals NHS
Foundation Trust,
Hills Road, Cambridge, CB2 0QQ
Secretary: (01223) 274366

Ward C3

Telephone: (01223) 217450/ 217714

Ward F3

Telephone: (01223) 217567

Clinic 6

Telephone: (01223) 216321

Information leaflets about wards C3 and F3 are available on the Addenbrooke's Website. Alternatively, please ask a member of staff for a copy of the leaflet you require.

References/ Sources of evidence

- Léauté-Labrèze C, Dumas de la Roque E, Hubiche T, Boralevi F, Thambo JB, Taieb A. Propranolol for severe hemangiomas of infancy. *N Engl J Med*. 2008, 358(24):2649-51
- Seigfried EC, Keenan WJ, Al-Jureidini S. More on Propranolol for haemangiomas of infancy. *N Engl J Med*. 2008, 359(26):2846-7
- Love JN, Sikka N. Are 1-2 tablets dangerous? Beta blocker exposure in children. *J Emerg Med* 2004, 26: 309-14



We are currently working towards a smoke free site. Smoking is only permitted in the designated smoking areas.

For advice and support in quitting, contact your GP or the free NHS stop smoking helpline on 0800 169 0 169

Help with this leaflet:

If you would like this information in another language, large print or audio format, please ask the department to contact Patient Information: 01223 216032 or patient.information@addenbrookes.nhs.uk

**Document history**

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