Microtia

This leaflet explains about microtia and what you can expect when your child comes to Great Ormond Street Hospital (GOSH) for assessment and treatment. It contains an outline of the treatment options available and ways to help your child before treatment starts.

What is microtia?

Microtia literally translated from the Greek means ‘little ear’. It is the medical word to describe a small or absent ear. It is present from birth (congenital) and can appear on its own or alongside other symptoms as part of a syndrome. Some syndromes that have microtia as a feature include: Goldenhar syndrome, hemifacial microsomia or Treacher-Collins syndrome. Microtia can affect one ear only (unilateral) or both ears (bilateral). Around ten per cent of children with microtia are affected in both ears.

If my child has microtia, does this mean that he or she is deaf in that ear?

Most children with microtia will have some degree of hearing loss on the affected side. This is because the middle ear, which contains the eardrum and tiny ear bones, is affected as well as the outer ear. In some children, the ear canal is blocked or absent, so sound waves cannot pass through the ear in the normal way.

Generally, although the outer and middle ear is affected, the inner ear is healthy so some options for restoring hearing are available. We do not recommend operations to repair the hearing tube and middle ear as they do not offer very good success rates and in some circumstances, could damage hearing further.

Children with unilateral microtia usually have normal hearing in their other ear, although this must be confirmed with hearing tests at a young age. Having normal hearing in only one ear will not usually cause any speech and language delay, and there are strategies to make the most of the child’s hearing while at school, for instance. Please see the Everyday life with microtia section for further details. It is unusual for a child with unilateral microtia to need a hearing aid.

Children with bilateral microtia will usually need some form of hearing aid at a young age to enable them to develop speech. This is often a ‘bone conduction hearing aid’ that transmits sound waves to the inner ear through the bones of the skull. In very young children, these hearing aids are usually on a headband, but as a child grows older a ‘bone anchored hearing aid’ might be suggested.
**How is microtia diagnosed?**

It will be obvious at birth that your child has a small or absent ear. Hearing tests will be used to work out whether your child has any hearing in the affected ear, and if so, to what degree. Your child’s hearing in the unaffected ear will also be confirmed. This will be helpful in planning your child’s education later in childhood. If the microtia is suspected as part of a syndrome, your child may need other tests to confirm or rule out the diagnosis. Some syndromes are inherited, in which case you may be offered genetic counselling.

**How common is microtia?**

Microtia is a rare condition affecting about 1 in 7000 babies. It seems to affect more boys than girls, and affects right ears more than left ears, although we do not understand why this should be the case. It also seems to be more common in Asian children than other races, but again we do not yet know why.

**What treatments are available?**

All the treatment options available are cosmetic. That is, they improve the look of the ear but cannot improve its function. There are three options for treatment available:

- No surgical treatment
- Ear reconstruction using a rib graft
- False (prosthetic) ear

More information about each option follows. The team will discuss each option with you, and the final decision about which option to take will be made jointly between you, your child and the microtia team.

**No surgical treatment**

While your child is young, you may decide to leave the ear as it is. Some children camouflage their ear by growing their hair long, while others deal with comments and questions more easily. The chances of successful surgery or prosthesis improve with age, so if your child changes his or her mind in the future, these options will still be open.

**Ear reconstruction using a rib graft**

This involves making a new ear from your child’s own tissue. The framework or ‘scaffolding’ is made from cartilage taken from your child’s ribcage. The reconstruction is carried out in two stages, and more information is available in our Ear reconstruction booklet. It is important that the cartilage is mature so this option is not offered to children under ten years old. Most children are at secondary school when this option is offered.
False (prosthetic) ear

This involves attaching implants and fixtures to your child’s head onto which a false ear is attached. This can be carried out on children around seven years old or more. It usually takes two operations: one to insert the implants and another to attach the fixtures. Once the operations are complete, the false ear is attached to the fixtures. The false ear itself is made from soft, silicone material and is sculpted to match your child’s other ear. It will need to be replaced every two years and the fixtures need to be cleaned every day.

When should treatment start?

Theoretically, it would be best to treat children with microtia before they start school. However, there are various reasons why this is not possible. A child’s ear reaches adult size around the age of six years, so treatment before this age could result in mismatched ears. If ear reconstruction is the preferred method, there is not enough cartilage in a child’s body before the age of ten years.

Everyday life with microtia

It can be hard to deal with looks or comments from strangers. Our booklet *Bringing up a child whose face looks different* was originally written for parents of children with birthmarks, but contains plenty of strategies for dealing with any unwanted comments or attention. It was written by one of our psychologists with many suggestions from parents.

Parents have told us that it can be difficult to know how to help a child who only has hearing in one ear. There are various strategies you can use at home and discuss with your child’s school.

At home

- Your child will find it easier to hear you if you stand or sit on the side of their hearing ear. This is especially important if there is background noise from the television or brothers and sisters.
- If you suspect your child has an ear infection in the hearing ear, visit your family doctor (GP) promptly.

At school

- Ask if your child can sit towards the front, with his or her hearing ear near the teacher.
- Learning to read may be more difficult if certain sounds are difficult to hear over classroom noise. Ask if quiet reading time is possible on the timetable.
- Check your child’s eyesight regularly so that he or she can read instructions easily.
- Talk to the Special Educational Needs Coordinator (SENCo) about any other aids that might help your child.
What is the outlook for children with microtia?

As discussed in the Treatments section, operations to correct microtia will only make the ear look better. It will not improve how well it works. The results from surgery are usually very realistic and will rarely need repeating in later life. The majority of children adapt to any hearing loss, growing up to work, study and have children.

Is there a support group for children with microtia?

This organisation offers support for children and families affected by microtia:

**Microtia Mingle**
Website: www.microtiamingle.co.uk

The following organisation might also be able to put you in touch with other families in a similar position:

**Contact a Family**
209-211 City Road
London EC1V 1JN
Helpline: 0808 808 3555
Email: info@cafamily.org.uk
Website: www.cafamily.org.uk

Microtia is one of the symptoms associated with the following syndromes, so these organisations may also be able to offer support and advice:

**Goldenhar Family Support Group**
Durrington
Ridgeway Close
Horsell
Woking GU21 4RD
Website: www.goldenhar.org.uk

**Treacher Collins Family Support Group**
114 Vincent Road
Norwich NR1 4HH
Tel: 01603 433736
Web: www.treachercollins.net

If your child has hearing loss in the affected ear, this organisation may be able to advise you about treatment options and schooling:

**National Deaf Children’s Society**
15 Dufferin Street
London EC1Y 8UR
Helpline: 0808 800 8880 (Voice and Text)
Fax: 020 7251 5020
Web: www.ndcs.org.uk

If you have any questions, please telephone the Clinical Nurse Specialists for Plastic Surgery on 020 7762 6945 or 020 7405 9200 bleep 0302 Monday to Friday from 9am to 5pm. Out of hours, please telephone 020 7405 9200 and ask to speak to the on call doctor for plastic surgery.

Compiled by the Plastic Surgery department in collaboration with the Child and Family Information Group

Great Ormond Street Hospital for Children NHS Foundation Trust
Great Ormond Street
London WC1N 3JH

www.gosh.nhs.uk