

Children Born with Cleft Lip and Palate



Your questions answered:

Alveolar Bone Grafting (ABG)

This booklet is for parents whose child will need an alveolar bone graft operation. It has been put together with help from CLAPA Kent and the South Thames Cleft team.

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Introduction

Clefts of the face take many forms, from a mere notch on the lip to a complete cleft of the lip, hard and soft palate.

It is often forgotten that the bone inside the gum (alveolous) may also be divided. (see photo)



This can cause difficulties and it has been standard practice now for many years to fill this gap with bone taken from another part of the body.

Why does your child need to have this operation?

The gap in the bone means that teeth cannot grow properly and the floor of the nose may not develop normally. Missing teeth have an adverse affect on facial growth and the shape of the jaw. Having a good set of teeth is important for eating and also for self confidence as you child moves into the teenage years.

How will the alveolar bone benefit my child?

The aim of the bone grafting is to repair the gap in the bone, provide better support for the base of the nose and produce new bone for the developing teeth to grow into.



Why is the gap in the cleft not closed at the same time as the other 'primary' surgery?

In the past, attempts to close the alveolar cleft early, at the same time as the lip, have badly affected facial growth as scar tissue inside the mouth can hinder key growth points. It has been shown that operating on the alveolous when the child is over 7 years old has little or no effect on facial growth. Most surgeons feel the best time for surgery on the alveolar cleft is when the permanent canine tooth is three quarters formed, generally about age 8-9 years.

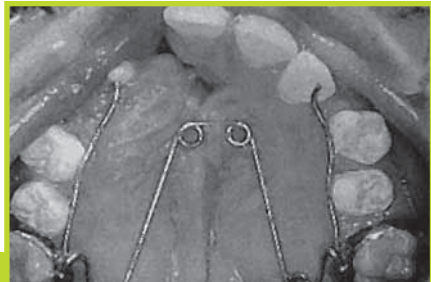


What preparation is needed before the operation?

Orthodontic treatment is usually needed before alveolar bone grafting to correct the narrowing of the upper jaw due to the cleft. An appliance widens the jaw before the graft is placed. This usually makes the gap in the gum bigger, but provides better access for the surgeon.

The widening of the upper jaw is usually carried out using fixed orthodontic appliances (braces) and the most commonly used brace is called a quadhelix (see picture).

This phase of treatment takes about 6-9 months prior to bone grafting. The orthodontist may also want to arrange to take out some of your child's top teeth. By removing teeth adjacent to the cleft, they will increase the space they have to work in and it will make it easier for your child.



What will happen during the operation?

The principle of the surgery is to close the hole in the floor of the nose, place the bone graft into the gap and then close the gum over the bone. In some hospitals the floor of the nose is closed when the cleft lip is first repaired. Often, however, this does not happen and the nasal layer is closed at the time of the grafting.

Where does the bone come from?

The most common site to use has been the hip bone but sometimes bone is taken from the tibia (shin bone) just below the knee. It is quite normal for the donor site to be more painful than the mouth following surgery. Sometimes, a small canula will be left in the wound so that local anaesthetic can be given after the operation to keep your child more comfortable. Despite this most children are able to go home and walk, even if with a limp, the day after surgery.

Will there be a lot of discomfort?

Your child's mouth will feel quite strange and they might not want to eat or drink to begin with. The place where the bone has been taken from will be sore and your child might have a 'drip' with special painkillers to ease the discomfort.

What about eating and drinking?

Your child can't have anything to eat for 6 hours and nothing to drink for 2 hours before their operation. Afterwards, your child can eat and drink when they feel ready. They should eat only soft food for a while when they go home; your surgeon will advise further on what foods are most appropriate and what should be avoided.



How long will my child stay in hospital?

Usually, your child will be admitted onto the ward the night before the operation. Virtually all children go home the day after the operation. Complications are rare and minor. The scar in the donor site (hip or shin) will fade considerably.

Do we have to do anything special to keep my child's mouth clean?

After surgery is the critical period. In the first 10-14 days keeping the mouth very clean is important to ensure a good result. Good careful brushing and copious mouth washing with a special chlorhexadine mouthwash pays off handsomely!

Why is cleanliness so important?

When the bone is moved into the cleft it is effectively 'dead' bone and forms a matrix that new bone can grow around. The new bone needs get a new blood supply to the cells to ensure the graft is successful. This is the crucial time when it is very vulnerable to infection.

To help increase the amount of available gum, it may be necessary to remove some baby teeth. This can double the available gum for cover.

How long will my child have to stay off school?

It is probably best to have at least a week off school so your child doesn't get an infection from anyone. All sporting activities are best avoided for at least 2 weeks.



What happens after the surgery?

This phase of the treatment requires a lot of patience. It may take several months or even a year before the canine tooth erupts through the new bone graft (see picture).

If the front incisors are crooked then these can be straightened 3-6 months after the bone graft. Full braces are best not put in place until all the permanent teeth have erupted into the mouth.

What happens after my child goes home?

Your child will need to come back and see the consultant in an outpatients clinic between 2-6 weeks after the operation (or according to local protocol). They will look at their mouth and the donor site to check all is well.



Who should I speak to for further advice?

Your child's surgeon, orthodontist or specialist nurse will be happy to answer any further questions you might have.

Contact details for these in your team are:

Surgeon	NAME	CONTACT TELEPHONE
Orthodontist	NAME	CONTACT TELEPHONE
Specialist Nurse	NAME	CONTACT TELEPHONE

Alternatively you can contact CLAPA on 02078334883 or email info@clapa.com. CLAPA will also be able to put you in touch with other parents who may have had experience of their child going through this operation.



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