operations

Adenotonsillectomy

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How are the Tonsils and Adenoids removed?

This operation is performed under general anaesthesia and the surgery usually takes around 30 minutes. The patient stays in hospital overnight with close observation and a gradual introduction of oral intake.

The traditional technique of Adenoidectomy involves blindly scraping the Adenoids from the back of the nose. However more recently there have been some important changes in the way in which the Adenoids are removed. They are still usually removed via an open mouth, but the back of the nose is now visualised using an endoscope or more commonly a dental mirror. The soft palate is pulled forward to facilitate this. Heat and suction are then applied (Suction Monopolar Diathermy) to the Adenoids which destroys them and removes them from the back of the nose. The heat also seals the blood vessels supplying the Adenoids. Compared to the old curettage technique, there is far less bleeding. Because the operation is done under vision, the removal is more complete meaning there is less chance of "regrowth". There is also less potential for damage to important nearby structures.

Dr Wabnitz uses an instrument called BiZact to remove the tonsils. The mouth is opened and one of the tonsils is gently pulled away from the underlying structures. The BiZact device clamps around part of the tonsil and delivers heat energy to seal blood vessels, and then divides the tissues connecting the tonsil to the underlying muscles. This process is repeated until the tonsil has been completely removed, and then is repeated on the other side. Compared to traditional techniques of Tonsillectomy, the BiZact device is quicker and there is negligible blood loss.

Once the operation has been completed, the patient is transferred to the Recovery Room, and then to their room on the ward. Children are often quite upset initially, not just because of the pain but also because of the foreign environment that they find themselves in. This soon settles. It's not uncommon for children to be sleepy for a few hours after the operation.

The child is closely monitored, particularly when they first arrive back on the ward. If the operation has been done to relieve Sleep Disordered Breathing or Obstructive Sleep Apnoea, then the child will be closely observed overnight including an ongoing measure of their oxygen levels and heart rate using a probe placed on a finger or toe. This often means that children are placed in an open bay with other children, where a nurse can keep a close eye on their progress.

All patients have an intravenous drip to maintain adequate hydration. Oral intake is gradually introduced, starting with the first drink about 2 hours after returning to the ward. Although the fluid line may be disconnected after the child is drinking, the plastic line providing access to the vein stays in place and is only removed just before discharge. This line also provides access for giving medication such as anti-vomiting medication. If the line is removed early and a child refuses to drink, it can be difficult to reinsert the line – not only is it unpleasant for the child, but also any dehydration makes finding a suitable vein more difficult.

It is not uncommon to have nausea and vomiting, and this may be due to the anaesthetic, the pain medications being given, or blood swallowed during the operation upsetting the stomach. Anti-vomiting medication can be given through the intravenous drip if required, although it often settles of its own accord within 24 hours.

The overall stay is usually one night in hospital, but this may be delayed if the patient has not established an adequate oral intake.

After the Operation

It takes most children 7 to 10 days to recover. However there is wide variability in this. Some children feel better after a few days (especially younger children) whereas others will take 14 days to recover.

It is best to keep your child home away from child care, kindergarten, school, or other large

groups of children for 7-10 days to decrease the chance of picking up an infection during the recovery phase. Keep them home longer if they are still requiring pain medication and/or are not eating and drinking normally.

General activities can be recommenced when your child feels up to it, but they should not exert themselves for the first two weeks when there is a risk of bleeding. Playing sport, swimming, heavy lifting, or rough play should all be avoided during this time.

Pain Relief

Most children experience a fair amount of throat pain during this time. There can also be ear pain, jaw pain, and neck pain. Ear pain occurs because a nerve that supplies the throat also supplies the ears, and this nerve can get confused as to where the pain is coming from. It is unlikely that this pain is due to an ear infection.

Your child will need regular pain medication and it is important that this is given regularly, particularly during the first few days. Indeed it is best to give regular Paracetamol every 4 to 6 hours for the first few days. I would even recommend waking your child during the night if they are due for a dose to ensure that you stay on top of the pain. As long as you follow the dosage guidelines, Paracetamol can be continued for as long as it's required. Paracetamol can also be given as a suppository, which is particularly useful in gaining control of pain in children who initially refuse any oral intake.

Paracetamol tends not to completely cover the pain, and so Ibuprofen (Nurofen) can be added in – up to every 8 hours, as required. Both Paracetamol and Nurofen can be given at the same time, but it is often best to try to stagger and alternate them. Ensure that you don't exceed the maximum daily dose for either medication. Although Nurofen is to be avoided prior to surgery, there is no convincing evidence that it causes increased bleeding after Adenotonsillectomy. If a bleed does occur, it is possible that a child who has had Nurofen may have a slightly higher rate of needing to go back to the operating theatre to control the bleeding.

If your child is still experiencing pain then Oxycodone is sometimes added into the mix, and there is no interaction between these three medications so it is safe to give all three at the same time (ensuring that the maximum dose for each is not exceeded). When giving the first dose of Oxycodone, it is best to monitor your child to ensure that it does not over-sedate them. There are some situations where Oxycodone is contraindicated, such as significant Obstructive Sleep Apnoea – if you have not been provided with a script for Oxycodone, and your child's pain is not under control despite regular Paracetamol and Nurofen, please contact Dr Wabnitz's rooms for further advice.

Other strategies include using anti-inflammatory gargles (Difflam) or local anaesthetic/antiseptic gargles (Cepacaine Mouth Wash Solution).

Note that the pain may worsen around day 5 to 7 after the operation. This is not uncommon and does not mean that there is an infection or any other concern developing.

If all strategies at providing pain relief fail and a child refuses to drink, then they will need to be readmitted for rehydration with intravenous fluids. This occurs in up to 3% of children having their Tonsils out.

Diet

Children need to be encouraged to drink over the course of the first week following Tonsillectomy to prevent dehydration and other complications. Ice-blocks are often well accepted by children. In fact, children can drink any fluid they wish although it is best to avoid hot fluids.

With regard to food, any food is acceptable but it is best to avoid spicy foods, anything that is acidic (such as oranges and tomatoes), and anything that is hot. Greasy foods may lead to nausea and/or vomiting. Children often prefer softer foods, like the traditional ice-cream and jelly. Another favourite is toast, and as this is more solid it tends to move any stagnated secretions, fluid, and debris away from where the Tonsils were and as such may prevent infection. If your child refuses food while recovering but maintains a good intake of fluid, then that is acceptable. The small amount of weight that may be lost during this time is quickly regained.

Chewing gum or chewing on lollies if the child is old enough is also helpful as it stimulates the production of saliva, and the movement of the throat muscles helps pump away swelling from the back of the throat.

Fever

It is not unusual to have a mild fever during the first day or so after the operation. Antibiotics are routinely prescribed if the Adenoids have been removed (see next section on Bad Breath). If there is a persistent fever of 38.5°C or over, please call Dr Wabnitz's rooms to discuss this further and/or arrange a review.

Bad Breath / Malodorous Smell

This is almost universal and can be surprisingly bad. Although it can be quite offensive to an adult that enters the child's room, it almost never bothers the child!

Antibiotics are routinely prescribed to minimize the smell that comes from the surgical site at the back of the nose. Most children will be prescribed Augmentin – an alternative will be prescribed if they are allergic to this.

The teeth should continue to be cleaned as normal.

Appearance of the Throat

During the first 10 days you may notice a creamy or yellowish layer covering the area where the Tonsils once were. This often gets misdiagnosed as an infection. It is not an infection, but is simply the way that a "scab" appears in the continuously moist environment of the mouth. It gradually fragments and falls off during the first week after surgery and is swallowed.

There may be tied black string seen in the location where the Tonsils were, especially at the sides of the back of the tongue. These are "surgical ties" and these will fall off by themselves and then be swallowed.

Snoring and Mouth Breathing

This is due to swelling of the tissues surrounding the Tonsils and Adenoids. There can be an associated increase in nasal secretions and general messiness of the nose. This settles quite quickly as the swelling resolves.

Avoid forceful nose-blowing for a few days after surgery.

Bleeding

Bleeding usually means that the scabs in the throat have fallen off too early, exposing a blood vessel that then bleeds. If there is any bleeding, proceed immediately to the nearest Emergency Department for assessment.

Country Patients

The risk of bleeding is present for the first 2 weeks after surgery (see below). If you live in a Rural/Remote region, it is best to stay in the Adelaide metropolitan area during this time – so that you can quickly obtain medical attention if a bleed occurs.

Voice

Transient voice change is common often because pain and swelling can limit the movement of the back of the roof of the mouth (the Soft Palate). This settles as the days pass.

If the Tonsils and/or Adenoids were very big, it is possible that your child's voice may change permanently. Parents often find that their child's voice sounds higher pitched. What really has happened is that the muffling effect of the Tonsils and/or Adenoids has been removed and the child's voice now has increased clarity – in a sense, what you are now hearing is a truer representation of what their voice was always meant to sound like.

Sore Throats

After recovering from this operation, your child may still get mild sore throats due to viral infections just like anyone else.

Follow Up Appointment

A follow up appointment is usually booked for 4-6 weeks after surgery.

What risks are associated with Adenotonsillectomy?

Even though all due care is taken, there can be injury to lips, gums, tongue, and/or the skin of the face. This usually resolves without any problems. Very rarely there can be burns to the palate, tongue, or lips due to the use of diathermy (electrical energy producing heat) to seal blood vessels.

There is a very small chance that teeth may be chipped or knocked out. This is more likely if teeth are decayed or loose, or have been capped or crowned.

The mouth is opened during the procedure and the corners of the mouth can dry out. At times, this can result in some cracking of the

corners of the mouth. Lip balm should be applied whilst this heals.

A change in the sensation of the tongue, and/or an altered taste can occur but this settles with time.

Bleeding

Bleeding occurs in 1 out of every 50 patients, and this can occur during the initial hospital stay at the time of surgery or during the first 2 weeks after the operation. It is best that your child stays home with a parent and does not have any overnight stays away from home. Any travel away from home is to be avoided during the first 2 weeks, particularly to remote areas. If your child or anyone in their extended family has had any problems with bleeding or easy bruising, please bring this to our attention.

If there is any bleeding when at home, patients will need to be re-admitted to hospital for observation and treatment with intravenous fluids and antibiotics at the very least. Up to half of the patients who have a bleed may need to go back to the operating theatre, and this is more common if the bleed occurs within the first 24 hours after surgery. The risk of having a bleed so severe that it requires a blood transfusion is less than 1 chance in 500. So whilst the overall risk of having a bleed is 2%, the risk of having such a significant bleed that it requires surgery or a blood transfusion is lower. If there are any objections regarding blood transfusions, based on religious beliefs or otherwise, please bring this to our attention.

In any event, if there is bleeding after having the tonsils removed you must seek medical attention. Don't delay in getting your child to the nearest emergency department, and don't delay in calling an ambulance if this is required. You will know if your child is bleeding as there will be profuse bleeding from the nose, coughing out of fresh red blood, or if blood is swallowed it irritates the stomach and the child will start vomiting up blood (which can be altered to appear dark red/brown).

Change in Vocal Resonance

If the Tonsils and/or Adenoids are very large, then their removal can alter the sound of the voice. In this situation, the child's voice changes from being abnormal because of large Tonsils/Adenoids to being more what they should have always sounded like.

Velopharyngeal Insufficiency

Dysfunction of the palate (roof of the mouth) can occur after surgery where the back part of the palate fails to shut off the back of the nose when it should – for instance, during swallowing and when making certain sounds while speaking. This can lead to fluid and/or food finding its way into the back of the nose on swallowing, and hypernasal speech.

It is common for this to occur temporarily and if so it settles within a few weeks. However there is a 1 chance in 1200 of persisting problems where there is an underlying problem of the structure and/or function of the palate. Rather than being a complication of the operation, removal of Adenoids "uncovers" a pre-existing problem of the palate. Treatment involves Speech Therapy and possibly further surgery by a Palate/Craniofacial Surgeon.

Nasopharyngeal Stenosis

Very rarely there can be significant scarring at the back of the nose where the Adenoids were removed from, resulting in ongoing nasal obstruction.

Damage to the Eustachian tube

Occasionally there can be damage to the Eustachian tube opening (the tube responsible for keeping the middle ear healthy) which can lead to middle ear problems.

Regrowth

Small lumps of Tonsil tissue can occasionally remain, particularly where the Tonsils extend down towards the back of the tongue. If this occurs, these small lumps can grow over time and can then cause problems again although this is rare. A Revision Tonsillectomy may then be required.

Regrowth of the Adenoids may occur but is less likely with the Suction Monopolar Diathermy technique, occurring in 2–3 % of cases. A Revision Adenoidectomy can be carried out if required.