Patron: Laura Hamilton
Head Office: PO Box 54, Helston, TR13 8WD Telephone: 0845 1306225 Fax: 0845 1300262
Email reach@reach.org.uk Website www.reach.org.uk

POLLICISATION - CLINICAL NOTES

These notes were written by ***Ann Gorecki*** *following her son James' polliciation operation. James is now 18 (born 1987).*

For a child missing one or both thumbs, the operation most commonly offered is pollicisation (pronounced 'polly-size-ation').

The timing of the operation, operative technique, after care etc. all vary between surgeons and your child may have additional problems (for example shortened or absent radius) which will need to be treated accordingly, but these notes will hopefully answer some of your basic questions.

What is pollicisation?

Pollicisation is an operation to shorten and rotate the – usually- index finger to form a thumb.

Why is it performed?

A thumb is important as it opposes the other fingers to make a wide range of movement possible.
The pincer movement, unique to thumb and finger, is more effective for fine control (for example in writing and using utensils) than the 'scissor' action between finger and finger.

At what age is it performed?

Surgeons usually do not like to operate under the age of a year as children tolerate anaesthetic better after that age. About the age of one year old is agreed by most to be the best time, as the child will re-learn: hand movements using the new thumb more quickly. However, sometimes arm or wrist problems need to be sorted out first, and it must be stressed that many successful pollicisations have been carried out at a later age.

THE OPERATION

How long does it take?

Usually between three-and-a-half and four-and-a-half hours. (Incidentally, if you wish to accompany your child to the operating theatre and stay until he/she is anaesthetized, do ask the Ward Sister when admitted, as this needs prior arrangement.)

After care.

When the child returns from theatre he/she will probably have a drip in the good arm, but this is taken down as soon as the child is drinking normally.

The affected arm will be heavily bandaged and elevated. Sometimes a skin graft is taken from the thigh to help form the cleft between thumb and finger. The arm is left for a week (maybe elevated for some or most of the time).

The dressing is changed under anaesthetic after a week and, if the wound is healing well, a plaster cast is applied. The child is then discharged, to be re-admitted 3-4 weeks later for removal of the plaster under anaesthetic. With a toddler or young child it is quite hard to keep the plaster clean and dry but it is important to do so and you should return to the hospital if the plaster becomes damaged. (We found that one of Dad's sports socks applied over the plaster at meal times was useful for keeping it clean!)

When the plaster is removed a lighter dressing is applied and the thumb can start to be moved. It can be quite swollen at first and it will take weeks or months for the child to use the thumb properly. The dressing can usually be dispensed with soon, but sometimes a 'C-splint' will be needed at night. This is a C-shaped piece of plastic held in place by tape in the cleft between thumb and finger to hold the thumb correctly in (op)position.

Follow-up.

This depends on the surgeon - usually monthly at first, then three monthly, and so on.

Are further operations needed?

Not usually. The new thumb will grow with the hand. Occasionally movement is not as good as hoped for and further surgery on tendons or muscles is required, but this is minor compared with the original operation.

Will it be performed at my local hospital ?

Probably not. Either an orthopaedic or plastic surgeon who specializes in hands will perform the operation; there are relatively few in Britain. The following list is probably incomplete but is of hospitals known to carry out pollicisations :

Stockport Infirmary;
St James' Hospital, Leeds;
Princess Margaret Rose Orthopaedic Hospital, Edinburgh;
Great Ormond Street Hospital, London;
Mount Vernon Hospital, Northwood.

ADDENDA

From an orthopaedic surgeon.

As a record of personal experience the notes cannot be faulted.

The operation is deferred, in the case of very young children, much more because it is technically easier once the hand is a little larger than because of any real problem with modern anaesthetic techniques.

One might emphasise that it achieves its best results when performed on the simplest cases – to substitute a finger for a missing thumb. Very often that is only one of several anomalies; which is not to say that it cannot tremendously enhance both the function and the appearance of even extensively misshapen hands.

It is nowadays almost unknown for the operation to fail, in the sense that the transferred finger is lost or atrophies.

If a parent is looking for some treatment, which will miraculously, create a wholly normal hand - pollicisation does **not** achieve that.

All it's benefits are not immediately apparent. The most satisfied patients, in this as in all other fields of surgical endeavour, are those whose expectations are least.