# LITTLE HANDS





An Initiative of Plastic & Hand Surgery Department

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Health Literacy: The Key to Timely Referral

Dedicated to Awareness, Understanding, and Early Action in Congenital Hand Conditions







**GANGA LITTLE HANDS** is an educational initiative by the Department of Plastic, Hand and Reconstructive Microsurgery and Burns, of Ganga Hospital, Coimbatore, to share knowledge about Paediatric hand conditions. This is a monthly bulletin and was first started in August 2024.

It has a compilation of various hand conditions treated by us. Little Hands is for anyone and everyone. It is not for surgeons only. The technical tips, 'Did you know?, Picture Gallery, Hand vignettes and the 'Clinician's corner' might be interesting to all the readers.



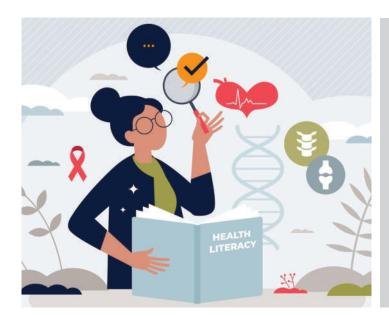
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#### **Editorial**

#### **Health Literacy**

The UNESCO promotes 8th of September as World Literacy Day. Health literacy or the lack of it is becoming an area of concern in our efforts to provide appropriate health care to the masses. To ensure health equity three things are important. One is awareness of what is possible, second where it is possible and third it must be affordable. In fields like Congenital Hand Deformities, knowledge gap exists in all three levels.



Ganga Little Hands published every month by the Department of Plastic, Hand and Microsurgery and Burns of Ganga Hospital is an attempt to bridge the gap in awareness. Health literacy does not just stop with increasing the awareness among the needy.

Higher levels of health literacy within the community yield social benefits too, for example by mobilizing service organizations to address gaps, guide patients to appropriate centers, and even contribute financially to their care. This we saw happen in the start of the Project Eklavya, by the Rotary Club of E Dynamix. Awareness of the possibilities galvanized their members to support the surgical care of such children. Through the growth of these children, we are ensuring a better India through one child at a time.

> Dr S Raja Sabapathy Dr Monusha Mohan (Editors)

# What are Congenital Hand Differences?

Hands that are different from the normal, at birth are called Congenital Hand Differences. These anomalies can be fused fingers, multiple fingers or thumb, absent digits, short digits, large digits or curved digits. These conditions can affect any part of the upper limb from shoulder to fingertips and can involve any structure in the hand like skin, fat, nails, tendons, nerves or bones.

## **Common Congenital Hand Conditions**

SYNDACTYLY (fused fingers) Syndactyly separation with full thickness skin grafting



Before



After

SYMBRACHYDACTYLY (Short fused fingers) Non-vascularized toe phalanx transfer for the little finger & Microvascular free toe transfer for the thumb



Before



After

# CONSTRICTION RING / AMNIOTIC BAND SYNDROME

(Short fingers with rings) Syndactyly separation & Release of the ring



**Before** 



After

# THUMB HYPOPLASIA (Underdeveloped thumb) Removal of the hanging / floating thumb & Pollicization of the index finger







Before

After

# POLYDACTYLY (Extra digits) Removal of the extra fingers & Pollicization of one of the fingers







After

#### Removal of the extra thumb & Reconstruction of the retained thumb



**Before** 



After

# MACRODACTYLY (Large digits) Shortening of the large fingers, Free nail bed grafting, Separation of the syndactyly & multiple debulking



**Before** 



After

# Why do they occur?

Congenital hand anomalies occur during the 'organogenesis' (formation of organs) period of pregnancy. Hand develops between the 4th and 8th week of pregnancy. The birth defects typically result from random events during development that are beyond anyone's control or prevention. Occasionally, a congenital hand difference is linked to a medical condition or syndrome that impacts multiple areas of the body.

Hand differences can also be hereditary, passed down through families. But in majority of the cases, we are unable to determine the cause. It is crucial to recognize that, in most cases, these differences are not the fault of the parents.

#### Factors known to increase the risk of Congenital hand differences

- Poorly controlled Maternal Diabetes
- Medications Thalidomide, Valproic acid, Methotrexate, Warfarin, Retinoic acid
- Smoking and Alcohol intake
- Exposure to chemicals and radiation

# Did you know?

# **Myths vs Facts**

- **Myth:** Congenital Hand Surgery is only for appearance
- **Fact:** Congenital Hand Surgery improves hand function - like grasping, pinching or writing
- **Myth:** Congenital anomalies occur due to parents' sins or karma as a punishment
- **Fact:** These differences occur during early pregnancy while the hand is forming. These are not due to anything the parents did.

- Myth: All children with Congenital Hand defect must undergo surgery
- Fact: Some conditions need surgery. Some can be managed with therapy or observation
- Myth: Congenital anomalies occur when pregnant mothers go outside on lunar or solar eclipses
- **Fact:** These anomalies occur during early pregnancy while the hand is forming. These are not due to anything the parents did.

# Clinician's corner

# From Delivery Room to Diagnosis: A Quick Guide for Paediatricians

#### Why Paediatricians matter?

Paediatricians and Neonatologists are often the first doctors to examine a newborn baby. Early recognition, correct explanation to parents and timely referral can make all the difference. Even if a condition is missed during this encounter, we feel that Paediatricians see the baby quite frequently during the first few years of the child's life, for immunization.

#### Signs to look for

- *General hand examination:* At birth or early infancy, check the hands carefully for its shape, symmetry, fingers and thumbs. The shoulder, arm, elbow, forearm and wrist should be examined.
- *Digits:* Look for extra fingers, missing thumb, small thumb, short fingers, fused digits, clefts, absent finger creases, nail deformities etc.
- *Hand Function:* Look at the baby's ability to grasp reflexively and the spontaneous use of the hand during feeds or play.
- Associated clues: Look for facial, chest, cardiac, renal, spine, external genitalia and lower limb anomalies.

#### How to talk to parents

- It is better to avoid insensitive terms like 'defects' or 'lobster hand' or 'club hand'. Use terms like variations or differences for the hand conditions. Cleft hand is no longer called 'lobster hand' and 'radial club hand' is now called radial dysplasia.
- Parents are often in great emotional turmoil or shock. Simple non-blaming language should be used while conversing. For example, "This happens when the baby's hands are formed in early pregnancy."
- Reassure about normal growth, intelligence and life expectancy. Please note that some syndromes can be associated with lethal congenital heart conditions or intellectual disorders.
- Most parents are worried about Paediatric anaesthesia and surgery in young children. Emphasize that safe anaesthetic and surgical practices exist and that timing matters.

#### Why it is important to refer to a Hand Surgeon

Certain congenital hand differences are straightforward to recognize, while others are more challenging because they may involve multiple features. Some hand differences can look alike but have different diagnoses. These conditions are often misdiagnosed at birth. Hence it is essential that the child

be evaluated by a hand surgeon who can recommend treatment or determine if further assessment for related syndromes is necessary. It is also important to refer the child to a hand surgery centre supported by an experienced Paediatric anaesthesia team.

#### When to refer?

- Early (within the first year of life) For surgical planning and parent counselling. Though the surgery may be performed later in life, the first visit often helps the parents to understand what their child has and the surgical plan in brief. This helps them to be prepared emotionally and financially for the future surgeries.
- Emergency If vascular compromise or nerve palsy or constrictions rings are present.
- Routine For isolated, stable anomalies, surgery is usually done anytime between 6 months and 2 years depending on the condition. The hand surgeon will be able to decide on the timing upon examination.

#### Word Wall

Understanding common terms in Congenital Hand Surgery

#### **Pollicization**

Making a thumb using a finger, usually the Index finger. This is performed in children born without a thumb or an underdeveloped thumb

#### Free toe transfer

Transferring a toe to the hand, to reconstruct the thumb or a finger using microvascular techniques

#### Clinodactyly

Abnormally curved digit in the coronal plane; side-to-side plane

#### **Symbrachydactyly**

Syndactyly + brachydactyly = short fused digits

#### Syndactyly release

Separating the fused or webbed digits

#### **Debulking**

Removing the hypertrophied fat in macrodactyly (gigantic digits or limbs)

#### Camptodactyly

Abnormally curved digit in a bent or flexed manner

#### **Opponensplasty**

Giving the thumb the ability to oppose using tendon transfer surgery

# Why health literacy is the need of the hour

Children are more likely to receive timely care when Paediatricians explain the condition clearly to the parents. Awareness helps the parents to understand that the condition is not a 'curse' and that they are not alone.

#### **Impact in Community**

- Missed Schooling and play opportunities
- Social stigma and teasing
- Reduced confidence and inclusion
- Economic burden if untreated
- Unrealized porential of children

#### Why Health Literacy Matters

- Early recognition timely referral
- Myths replaced with facts less stigma
- Communities support inclusion
- Parents understand surgery is safe & effective
- Families make informed decisions

#### Help us heal Little Hands | Make a donation

It is difficult to imagine what the parents experience when they find out in the labour room that their newborn baby has a congenital limb defect. The family often feels devastated as their hopes fade. Most of the limb anomalies have a surgical solution that is aimed at making the hand to function in a better way.

Globally, congenital anomalies or birth defects affect 2-3% of births. In India, 1-3 out of 100 babies born are with birth defects. Though musculoskeletal anomalies are the most common defects seen, rarely we find major initiatives aimed at managing these defects. A lot of regional and international proposals are directed at treating and supporting children with congenital heart diseases and orofacial defects like cleft lip/palate. Though isolated congenital limb defects are not life threatening like the cardiac and craniofacial anomalies, they are disabling and lower the quality of life.

### You can make a tax-deductible donation today and transform the lives of these kids by giving back their childhood.

To make a donation, please write to rajahand@gmail.com

At Ganga, we have a specialized team of doctors to provide comprehensive care to these children. One of the basic surgical principles of congenital hand surgery is to correct the deformities before the child attains school going age. Often these defects are bilateral and involve multiple fingers, necessitating staged surgical procedures. We have highly experienced Paediatric anesthesia staff to support the surgical team. The associated anomalies are taken care of by our Pediatric orthopedic, spine, maxillofacial and cardiac teams. Ancillary services like physiotherapy, nutrition and speech therapy are also available.

# Project Eklavya - A Joint Initiative of Rotary E Club of Metro Dynamix and Ganga Hospital



Rotary E Club of

India is witnessing an epidemiological transition from communicable diseases to non-communicable diseases. According to March of Dimes report (2006), 6-7 per 100 new born babies have birth defects. When more focus is on new born survival, we fail to pay attention to the quality of life of these children born with defects. When a child with congenital hand deformities survives and grows up, it is not just their hand function that is affected, their self- esteem and emotional wellbeing are too deeply impacted.

# A Project for children with Congenital Hand **Deformities**

Musculoskeletal defects are the second most common birth defects, however initiatives to help children with hand anomalies are rare. Project Eklavya was launched by the Rotary E club of Metrodynamix in collaboration with Ganga Hospital, Coimbatore, on 06.07.2025. With this initiative, we try to fill the gaps in care and support of these children like, paucity of insurance coverage for children with birth defects, multiple limb involvement, syndromic associations that increase the financial burden, multiple stages of surgeries and post surgical rehabilitation. We had our first beneficiary last month.

# World Congenital Hand Symposium



Registration is open now! Kindly sign up for the meeting at www.wcs2026.com

# **Stay Connected**



To get updates about our services for children with hand disorders, to grab the future issues of the monthly bulletin and to know what the department of Plastic, Hand and Reconstructive Microsurgery and Burns offers scan the code.





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