

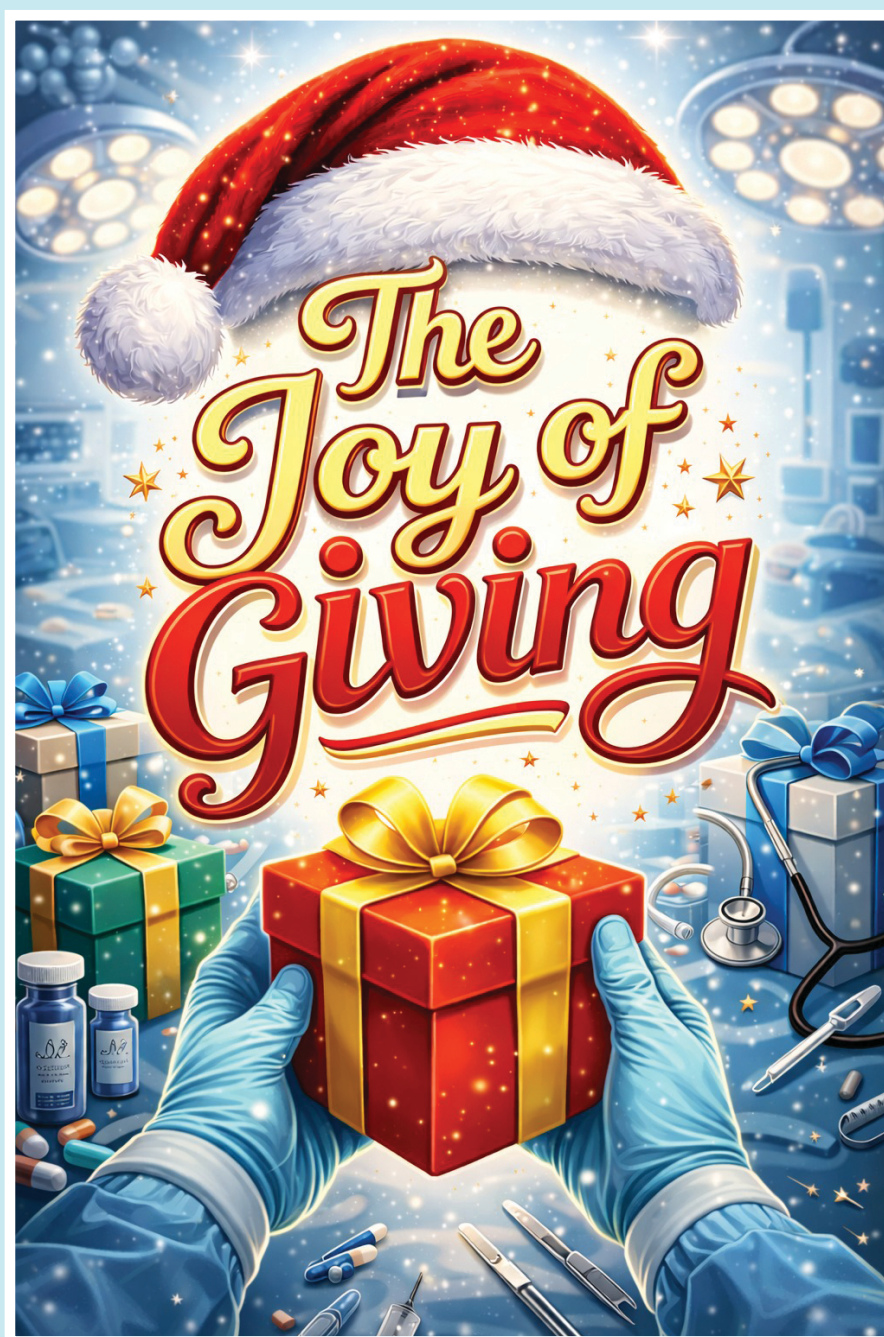
# LITTLE HANDS

**GANGA**  
MEDICAL CENTRE & HOSPITALS PVT LTD

**GANGA**  
LITTLE HANDS

An Initiative of Plastic & Hand Surgery Department

Monthly Bulletin | Issue 17 | December 2025



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

# LITTLE HANDS



**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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**To read all the issues of  
Little Hands**

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## Editorial

### The Joy of Giving



*The joy of giving—  
the more you give,  
the more you receive.*

As we near the end of the year 2025, it is time to reflect on our work in the year that has gone by and welcome with optimism the coming of 2026. Publication of every issue of Ganga Little Hands has given us an opportunity to reflect on what we have done and what we wish to do.

What has given us the most satisfaction is our ability to provide children with hand deformities or injuries, the surgical correction they required, irrespective of the capacity of their parents to afford the cost of care. This we did for each and every child who entered the portals of Ganga hospital. We are grateful for our partners who made it happen. We profusely thank the members of

the Rotary Club of E Dynamix, M/s Lakshmi Mission Works, Karur Vysya Bank and so many institutions who lent their hands to make the hands of the children better.

Everyone agrees that there is joy in giving. In this world where there are so many avenues for giving, where do you give is the question. How do you prioritize? That is a difficult question to answer, but we sincerely believe that putting your might to make the crippled hands of children functional is a great investment. What we do is not just for the day, it is for the lifetime of the child. It is just not the child that we treat but we uplift the entire family and in turn we participate in Nation building.

In the fight against disability in children it is our moral duty to win. It is just not enough if we had good intentions. We need resources. Your contribution will help to bridge a vital gap in affordability. We at Ganga also stretch our bit to narrow the gap so that we are able to use your contribution to the benefit of many.

The world has always benefitted from inspired idealists. When we help child's hand to become functional you become one of those people whose kindness has changed the world.

**Dr S Raja Sabapathy**  
**Dr Monusha Mohan**  
(Editors)

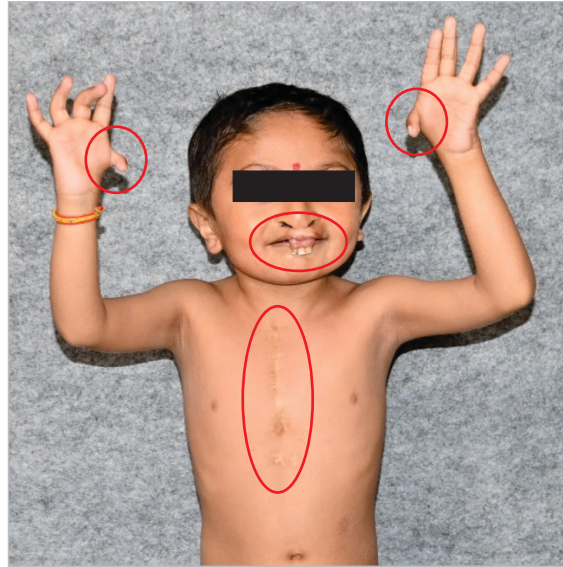
## Clinician's corner

### Radial Longitudinal Deficiency & Associated Syndromes

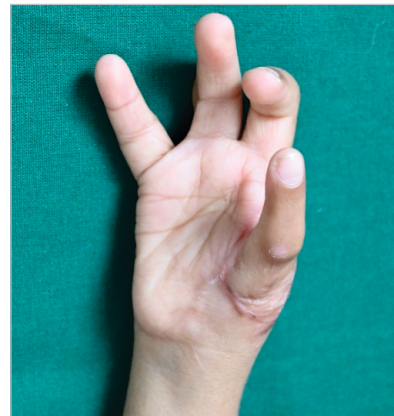
Radial dysplasia including thumb hypoplasia is the most common hand difference that is associated with other organ anomalies. The systems involved can range from cardiac to haematologic.

System	Syndrome	Screening	Significance
Haematologic	<ul style="list-style-type: none"> <li>Fanconi Anaemia</li> <li>Thrombocytopenia Absent Radius (TAR)</li> </ul>	<ul style="list-style-type: none"> <li>Complete Blood Count, Platelet Count</li> </ul>	<ul style="list-style-type: none"> <li>Fanconi's Anaemia may Present Late</li> </ul>
Cardiac	<ul style="list-style-type: none"> <li>Holt-Oram Syndrome</li> <li>VACTERL</li> </ul>	<ul style="list-style-type: none"> <li>Clinical Cardiac Evaluation</li> <li>ECHO</li> </ul>	<ul style="list-style-type: none"> <li>ASD, VSD, conduction defects may be present</li> </ul>
Renal	<ul style="list-style-type: none"> <li>VACTERL</li> </ul>	<ul style="list-style-type: none"> <li>USG KUB</li> </ul>	<ul style="list-style-type: none"> <li>Renal Agenesis may be Asymptomatic</li> </ul>
Gastrointestinal	<ul style="list-style-type: none"> <li>VACTERL</li> </ul>	<ul style="list-style-type: none"> <li>Feeding History</li> <li>Perineal Examination</li> </ul>	<ul style="list-style-type: none"> <li>Tracheoesophageal Fistula, Anorectal Anomalies may be present. Relevant in neonates</li> </ul>
Spine	<ul style="list-style-type: none"> <li>VACTERL</li> </ul>	<ul style="list-style-type: none"> <li>Spine Examination</li> <li>Xrays if needed</li> </ul>	<ul style="list-style-type: none"> <li>Vertebral anomalies, torticollis are commonly seen in VACTERL</li> </ul>
Ear	<ul style="list-style-type: none"> <li>Townes - Brocks Syndrome</li> <li>Duane Anomaly</li> </ul>	<ul style="list-style-type: none"> <li>Hearing Screening, Ear Anomalies</li> </ul>	<ul style="list-style-type: none"> <li>Symptoms are Common</li> </ul>
Ophthalmologic	<ul style="list-style-type: none"> <li>Duane Anomaly</li> </ul>	<ul style="list-style-type: none"> <li>Eye Examination</li> <li>Cranial Nerve Examination</li> </ul>	<ul style="list-style-type: none"> <li>Squint, Abnormal Eye movements may be present</li> </ul>

**VACTERL** - **V**ertebral Anomalies, **A**nal Atresia, **C**ardiac Anomalies, **T**racheo-**E**sophageal Fistula, **R**enal Anomalies, **L**imb Anomalies



*A child with bilateral thumb hypoplasia (underdeveloped thumbs) with cleft lip / palate and congenital cardiac disease (both operated elsewhere). He underwent Pollicization surgery for the right hand at Ganga Hospital.*



*Before and after removal of the severely underdeveloped thumb and transposition of the index finger to create a new thumb (Pollicization).*



*Struggling to hold a toy in the absence of a stable thumb. After Pollicization, he was able to hold the toy between the finger and the opposable thumb.*

## Did you know?

### The Week - 5 Connection: Heart and Hand

The most common system involved in radial dysplasias is the cardiac system. This is because both structures undergo critical development during the 5th week of gestation.

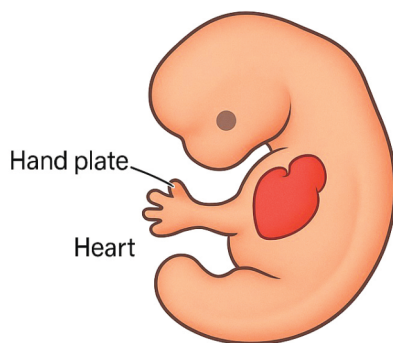
In this shared embryological window of development, cardiac tube formation, looping & chamber formation and septation occur. In the same window, hand development starts, preaxial (thumb side) formation and digital patterning occur. Common genes control both the development. Several key transcription factors and signalling pathways simultaneously direct heart septation, radial limb axis formation and thumb differentiation.

#### Syndromes with radial + cardiac defects:

- **Holt - Oram syndrome** —» ASD, VSD, conduction defects
- **VACTERL association** —» cardiac anomalies in ~40%
- **Fanconi anaemia** —» cardiac defects occasionally
- **Chromosomal syndromes** (Trisomy 18, 22q11 deletion) - Conotruncal and aortic arch anomalies

These children should have an initial baseline cardiac evaluation. Usually the babies/children who are referred to us come with a baseline ECHO report. If the child is asymptomatic, we do not usually repeat the ECHO. Our cardiologist evaluates the child preoperatively.

The heart and upper limb develop concurrently during the 4<sup>th</sup> - 6<sup>th</sup> week of gestation, a critical period of organogenesis. Disruption during this window can result in radial ray defects with associated cardiac anomalies.



**Critical window : 4<sup>th</sup> - 6<sup>th</sup> week**

#### Key pathways that regulate both limb patterning and cardiac morphogenesis:

- **TBX genes (especially TBX5)** - Radial ray development and Cardiac septation
- **Sonic Hedgehog (SHH) pathway** - Anterior - posterior limb axis and Cardiac looping and outflow tract development
- **FGF & WNT signalling** - Limb bud outgrowth and Cardiomyocyte proliferation / migration

## Hand Vignettes

### Hands That Cook

Surgery is not the only field where hand skills matter. A chef becomes one, after years of training in mastering the basics, and growing through real kitchen experience. In traditional Japanese kitchens, the apprentices spend a few years only washing rice and watching before they are allowed to cut fish for Sushi.

#### The Chef's Claw Grip

##### Did you know?

Chefs around the world use a special cutting technique called the claw grip to keep their fingers safe.

- Fingertips curl inward like a claw
- The knife is guided along the knuckles
- This allows fast, precise cutting while protecting the fingers

#### Safety Practices

- A sharp knife is a safe knife
- Never leave a knife in a sink full of water
- 'Coming through with a knife' - announce your arrival
- Never try to catch a falling knife
- Never leave boiling or frying items unattended



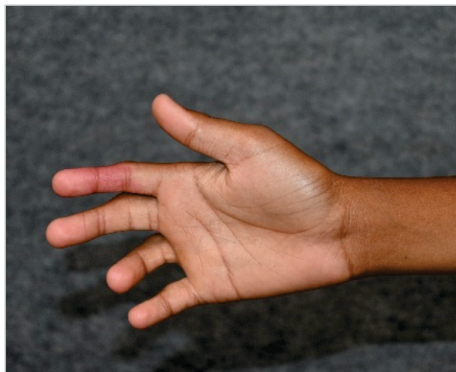
The training process of a Chef mirrors that of a Surgeon. The hierarchy of the kitchen - commis, chef de partie, sous-chef, and eventually chef de cuisine is taught first. In early training, trainees have to do long hours of repetitive tasks: peeling, chopping, marinating, prepping trays, cleaning stations, measuring ingredients, and observing seniors. This phase builds discipline. As they progress, chefs learn advanced techniques like butchery, pastry arts, making sauces, planning menus, costing, and understanding ingredient seasonality. At each stage, they must demonstrate reliability, speed, precision, and the ability to stay calm under pressure.

## Real Life Story - “Every Journey matters”

### A Mother's Joy

**Arthrogryposis** is a congenital hand anomaly that refers to multiple congenital joint contractures (stiff joints) affecting two or more joints in different parts of the body, present at birth. Distal Arthrogryposis is a subgroup of arthrogryposis where the contracture involves the distal joints in the hands and feet. The bent fingers may interfere with daily activities apart from their poor aesthetic appearance.

Master. A, was brought to us by his parents with similar complaints. They needed financial assistance too. Read the ‘Real life story’ as narrated by his mother.

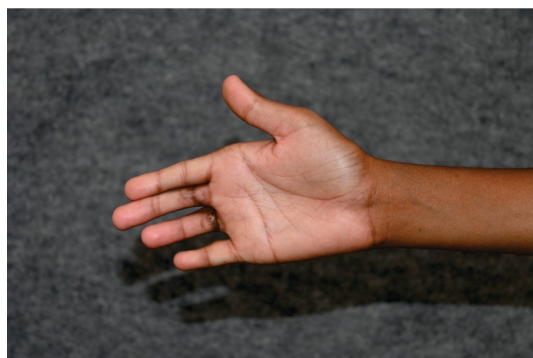


*The bent fingers that made simple daily activities difficult for the boy*

“I have two children, the youngest one is A. I do tailoring work and go from house to house, setting up the machine in front of the houses and sewing clothes. My husband works as a gas repairman. My youngest son, A was born with deformed fingers.”

They were referred to us from a government hospital and considering their economic condition, the surgery was done under Project Eklavya.

“Initially, the fingers were not even moving. Now he is moving his fingers well. A very big change has happened to my son through this surgery. I am very happy when I see my son now.”





“Since he was a child – I have seen him struggle. I felt very sad when he could not eat properly. When he folded the hands to greet others, he could not do the pose like others. I felt very sad when he could not do everything normally like other children. But after this surgery, my son's fingers started working. When I saw his fingers working, my heart was filled with joy. Tears filled my eyes.

Thanks to *Ganga Hospital and Rotary E-Club of Metro Dynamix.*”

### 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](mailto: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



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A Joint Initiative 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 well-being 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.



***Project Eklavya provides free or sponsored surgeries for children with congenital hand deformities***

For more details, log on to <https://eklavyachildren.com/>

# The 13<sup>th</sup> World Symposium on Congenital Malformations of the Hand and Upper Limb

25<sup>th</sup> - 28<sup>th</sup> February, 2026 | Venue - Ganga Hospital, Coimbatore




**13<sup>th</sup> World Symposium on  
Congenital Malformations of the Hand and Upper Limb**

**25<sup>th</sup> to 28<sup>th</sup> February 2026 | Ganga Hospital, Coimbatore, India.**

**LEGACY LECTURE**



**Dr Kerby Oberg**  
USA

**“Developing a Limb: Genetics, Mechanics, and Cellular Intelligence”**

**SPECIAL LECTURE**



**Dr Terry R. Light**  
USA

**“Pathologic Anatomy of the Anomalous Hand - Implications for growth and treatment”**

**KEYNOTE SPEAKERS & TITLES**

 <p><b>The importance of assessment and management of the 1st web in children with congenital hand differences</b></p> <p><b>Dr Chris Coombs</b> Australia</p>	 <p><b>Surgical Techniques for Cleft hand</b></p> <p><b>Dr Keizo Fukumoto</b> Japan</p>
 <p><b>The value, power, and community benefits of congenital registries</b></p> <p><b>Dr Charles Goldfarb</b> USA</p>	 <p><b>Microsurgical reconstruction of hypoplastic thumb</b></p> <p><b>Dr Amit Gupta</b> USA</p>
 <p><b>Congenital anomalies of the thumb - My journey and lessons learnt</b></p> <p><b>Dr Bhaskaranand Kumar</b> India</p>	 <p><b>Congenital hand surgery in the older or adult patient</b></p> <p><b>Dr Wee Leon Lam</b> Singapore</p>
 <p><b>Development of our national CULD registry and the psychosocial and appearance outcomes of CULDs</b></p> <p><b>Dr David B McCombe</b> Australia</p>	 <p><b>Pollicization and beyond: The evolving landscape of congenital hand surgery</b></p> <p><b>Dr Scott Oishi</b> USA</p>
 <p><b>Surgical Strategy of the Congenital Hand Difference Based on MRI and Sonography.</b></p> <p><b>Dr Woo Sang-hyun</b> South Korea</p>	 <p><b>Role of comprehensive care in children with syndromic hand differences</b></p> <p><b>Dr Gill Smith</b> UK</p>
 <p><b>Reflections on a Career in Paediatric Upper Extremity: Solutions and Ongoing Problems</b></p> <p><b>Dr Ann Van Heest</b> USA</p>	

## 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.

## To make Donations

Account Number : 1120115000010920  
Account Name : Ganga Plastic Reconstructive & Microsurgery Trust  
Bank Address : 577, Oppanakara Street, Coimbatore-641001  
IFSC Code : KVBL0001120  
Swift Code : KVBLINBBIND



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