

# LITTLE HANDS

**GANGA**  
MEDICAL CENTRE & HOSPITALS PVT LTD

**GANGA**  
LITTLE HANDS

An Initiative of Plastic & Hand Surgery Department

Monthly Bulletin | Issue 7 | February 2025



## Art on Little Hands



**Towards Fulfilling the  
Reconstructive Surgical Needs of Children**

# 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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Little Hands**

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## *Editorial*



### **The First Visit**

The joy in being a doctor is the opportunity to have profound personal satisfaction of making a positive impact on the lives of people. This becomes higher when we treat the hands of children because not only do we improve their quality of life, but also provide comfort to the entire family.

Having a child with a congenital hand deformity comes as a shock to many parents when they first see their child. The reaction could range from justified concern to frank anger or a high level of guilt. Most congenital hand anomalies are not and can not be recognized in prenatal scans and this adds up to their feelings. A hand surgeon is in a unique position to provide comfort to the family. Now for most conditions we can improve their functional status to make the children lead normal lives.

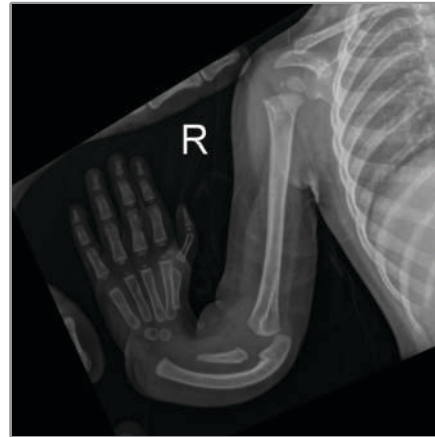
Decades of experience has taught us the value of the first visit of the family to our centre. The parents demand our time, need to be listened to and once that is done, the most important aspect they appreciate is the professionalism in clinical examination and explanation of the options of care available and the possible outcomes. Very often we diagnose associations which have not been found before, and our experience allows us to allay their fears. The trust they develop can be a tremendously satisfying experience. At Ganga, we understand this, and do our best to provide every child with a congenital hand anomaly the best they deserve and take efforts to make the family understand that we all work together for the same cause. It all starts with the first visit, and hence we would like to see these children early even though most of them do not need early surgery.

Contact us anytime at [rajahand@gmail.com](mailto:rajahand@gmail.com) to make that 'bonding' first visit.

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

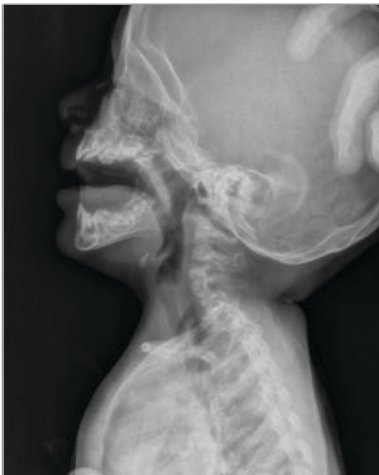


## Comprehensive Care in Congenital Hand Surgery



*Baby girl with right radial longitudinal deficiency*

The female child who was brought to us for surgery for the right radial hypoplasia (radial club hand) was found to be keeping the head tilted to the right side. Though her parents brushed it off saying it is her habitual neck posture, we decided to do a preliminary evaluation of the spine, as scoliosis can cause torticollis and vertebral anomalies are usually associated with radial longitudinal deficiencies.



*Multiple vertebral anomalies*

**VACTERL** syndrome is an acronym for the congenital anomalies associated with radial deficiencies - **V**ertebral anomalies, **A**nal atresia, **C**ardiac defects, **T**racheo**E**sophageal fistula, **R**enal anomalies and **L**imb defects. The radiographs of the child revealed various cervical vertebral anomalies and the parents were glad we picked it up. Our Spine department has advised higher imaging for management once the hand defects are treated.

We have been able to detect associated anomalies in other systems, in children who were brought to us for management of the congenital hand differences. Another female child who had constriction ring around the distal third of the left leg had a bleeding cystic swelling in the umbilicus. Our Paediatric surgeon operated on her and the swelling was diagnosed to be an Omphalocele.



*Constriction ring syndrome with an Omphalocele, a visceral defect seen associated with Constriction ring syndrome.*

A boy baby was born with cleft lip and palate. He also had constriction ring around the distal third of his right leg. Both the anomalies were surgically corrected.

Ganga hospital is affiliated to the Smile Train programme, that provides free cleft care to children in need. Care includes surgery, nutrition, speech therapy, and other services. Smile Train's goal is to provide access to care for every child with a cleft.



*Baby with cleft lip and palate; before and after surgery. He underwent Millard technique of cleft lip repair and Bardach two flap palatoplasty in stages.*



*The same baby had a circumferential constriction ring of the distal third of the right leg. The ring was released using multiple Z-plasties*

A girl baby was brought to us with Apert syndrome. The cleft palate, craniofacial deformity and the syndactylies in the hand were operated at Ganga hospital. Our Plastic and Faciomaxillary team are well supported by our in-house Neurosurgeons



*Apert syndrome: craniosynostosis, complex syndactyly between the fingers of both hands and cleft palate.*

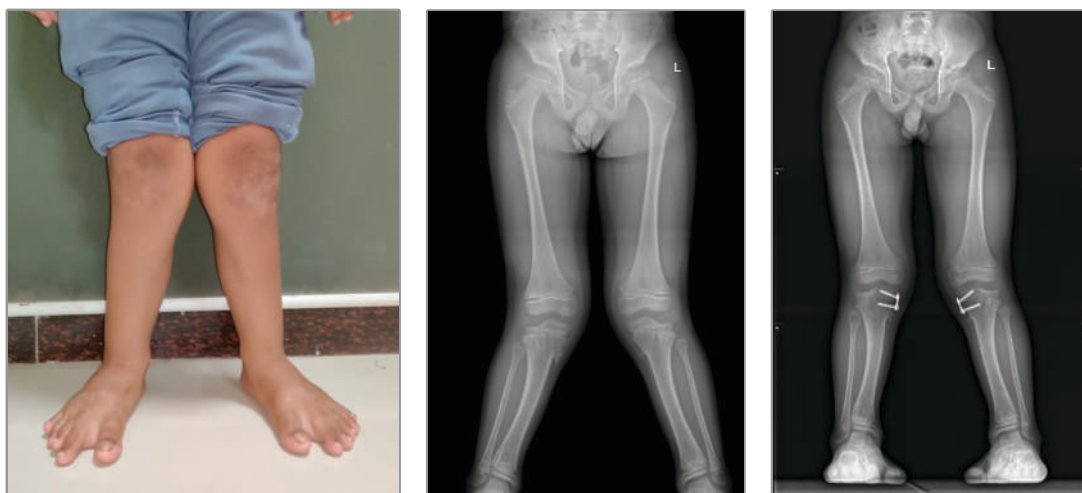


*Le Fort III level advancement, palatoplasty and separation of the complex syndactyly to create a four-digit hand on both sides.*

Another boy had Ellis van Creveld syndrome. He had bilateral post axial polydactyly (an extra finger on the ulnar side) with genu valgum and short stature. He underwent tibial hemiepiphyseodesis for correction of the genu valgum. The right hand needed surgery and the extra finger was removed.



*The extra digit was surgically removed*



*Genu valgum was surgically corrected*



Associated lower limb anomalies like talipes equinus varus (club foot) or knee or hip deformities are taken care of by our Paediatric Orthopaedics team.

Girls with Poland syndrome (January 2025 Issue) who have symbrachydactyly with ipsilateral pectoral and mammary hypoplasia are offered breast reconstruction. Be it identifying an undescended testis in a male child with syndactyly or finding out an accessory nipple along the Milk line of Schulz in a girl child with constriction ring syndrome, the parents have been happy to receive complete care or even feel satisfied just to know the right diagnosis.

It is important to examine the child, head-to-toe and front-to-back, to look for associated birth defects. Sometimes hand surgeons may be the first clinicians to detect a defect. Comprehensive health care is the need of the hour in paediatric care and to get it all done under one roof makes the lives of these children easier. The first step to this kind of high-quality care is identification of the syndrome or associations.

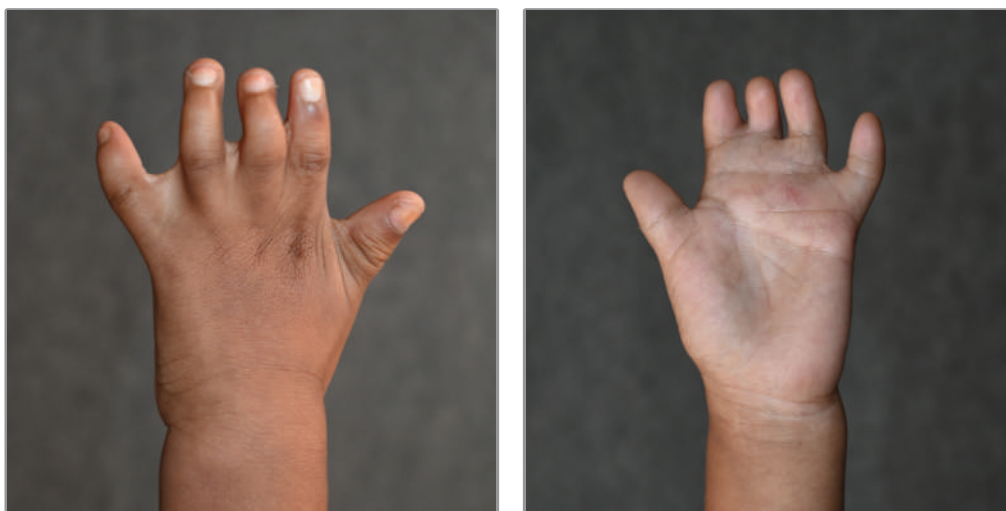
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## Did you know?

### Syndactyly of the border digits (thumb/index finger and ring/little fingers) require early attention

In hand surgery, a frequently asked question is ‘When can we separate the joined or webbed fingers (Syndactyly)?’. There are no ‘one-word’ answers for this question. The standard answer is the timing of syndactyly separation depends on the digits involved. If the border digits (thumb/index finger and ring/little fingers) are involved, the separation should be done as early as 6 to 9 months of age. These digits should be released first when multiple digits are involved.

The significance of involvement of the border digits is that one finger is much shorter than the adjacent digit to which they are attached. In such syndactylies, the shorter digit holds up the longer one restricting its growth. The longer digit may develop flexion, angulation or rotation deformities, over time. To prevent flexion contractures and to allow the growth potential of the fused digits, separation should be done before one year of age.



*A child with symbrachydactyly. All the fingers are short with webbing.*

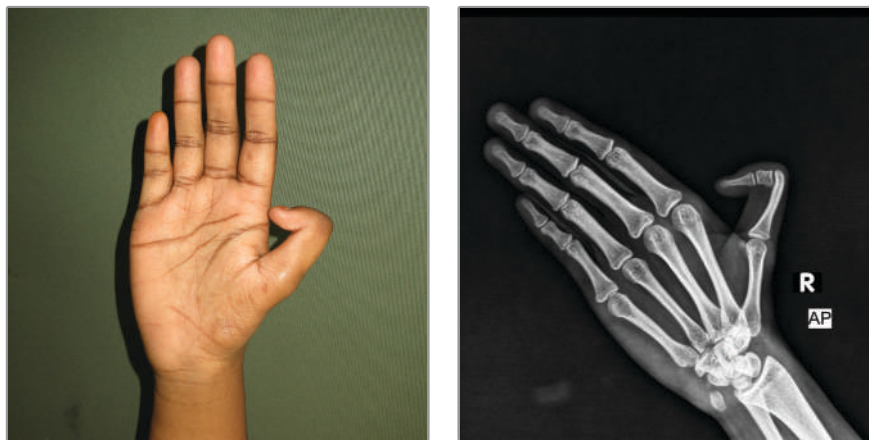


*Follow-up images: The first two photos were taken after the first stage, and the next two were taken after the second stage of surgery*

The syndactyly separation was done in two stages: First, the little finger (border digit) was released along with the index finger. The middle and ring fingers were separated in the second stage of surgery.

## Clinician's Corner

### Triphalangeal Thumb



*A girl with right triphalangeal thumb*

A thumb usually has only two phalanges. Triphalangeal thumb is one which has three phalanges. The middle phalanx can be an abnormal phalanx – a triangular or trapezoidal delta phalanx. The incidence is 1 in 25 000 newborns. The thumb is longer than a normal thumb due to the extra phalanx as well as the longer first metacarpal. The corrective surgeries include removal of the extra phalanx, wedge osteotomies of the delta phalanx or joint reduction of one of the interphalangeal (IP) joints. We need to correct the deformity if any, make the thumb stable and in most cases shorter. A long thumb looks like a finger!

The triphalangeal thumb may be associated with radial polydactyly or thumb duplication (Flatt-Wassel Type VII).





*The girl underwent surgery for her triphalangeal thumb: excision of the delta phalanx and IP joint arthrodesis*



*Excellent results achieved at 8 months after surgery*

The surgery was performed during the Live Ganga Hand & Microsurgery Operative Course conducted in the year 2019.

This year we have the Ganga Hand & Microsurgery Operative Course on 17-19th of July, 2025. We are sure to include very many children with congenital hand differences in the list of surgeries to be done. Grainne Bourke and Raja Sabapathy will be demonstrating congenital hand surgeries.

**GANGA**  
MEDICAL CENTRE & HOSPITALS PVT LTD

Ganga Live Surgery Courses  
**Ganga Hand & Microsurgery Operative Course**  
17<sup>th</sup> - 19<sup>th</sup> July 2025  
Venue : Ganga Hospital, Auditorium Website : [www.ghoc2025.com](http://www.ghoc2025.com)

Hybrid Event Powered by Microsoft Teams Supported by Quadra

Scan the QR code to register

**Hybrid Course**

Dr S Raja Sabapathy Course Chairman  
Dr Hari Venkatramani Organising Secretary  
Dr Praveen Bhardwaj Scientific Chairman

**International Faculties**

Ms. Grainne Bourke Plastic Surgeon, UK  
Dr. Duretti Fufa Hand and Upper Extremity & Trauma Surgeon, USA  
Dr. Warren Hammett Hand & Upper Extremity & Trauma Surgeon, USA  
Mr. Jonathan Hobby Hand & Orthopaedic Surgeon UK  
Mr. Alexander Lluich Orthopaedic Trauma Surgeon Spain

**Course Highlights**

- 27 - hours intensive educational program
- Live demonstration of 30 surgeries over 3 days
- Live interaction with the operating faculty
- Ample opportunity to discuss subject & cases with the faculty
- Same rates for both in person and online registration
- 6 - Small group discussions for inperson delegates only
- Will cover day-to-day hand surgery cases & the most complex reconstructions
- A perfect mix of Orthopaedic & Plastic related hand surgery operations
- Can be combined with pre/post Ganga Micro Surgery Course

**Registration Details**

S.No	Category	Registration Fee	Total
1	Surgeon Trainees (In person)	₹ 4500 + 18% GST	₹ 5310
2	Surgeon Trainees (Online)	₹ 4500 + 18% GST	₹ 5310
3	Surgeons (In person)	₹ 7500 + 18% GST	₹ 8850
4	Surgeons (Online)	₹ 7500 + 18% GST	₹ 8850
5	Overseas Registration	\$ 150 (Low, Lower - Middle Income Countries) \$ 300 (Upper - Middle & High Income Countries)	

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## Picture Gallery



*Picture submitted by Dr Ajai Kumar Prithvi, Neonatologist, Trivandrum*



**Q: The term male baby was born with a duplicated thumb on his left hand. When can the child be taken up for corrective surgery for the hand?**

**A:** The baby has Radial polydactyly or Thumb duplication on the left side. Children develop the pincer grasp only by 10-12 months of age and the surgery will be done at around one year of age. Though the surgery will be

done around one year, it is good to visit a hand surgeon beforehand. The minds of the parents are filled up with numerous questions from the causation to the ultimate functional outcome. They all need authentic information. So we would advise them to see us anytime between 3 and 6 months when travel becomes much easier. The hand specialist will examine the baby as well as explain the diagnosis. It is also good to counsel the parents especially the mother who might be blaming herself for the mishap, due to lack of appropriate information. Not only the hand but the probable associated anomalies are also looked for. The child should be under close follow-up so that the thumb joint movements and thenar muscles can be evaluated.

It should be explained to the parents that the two thumbs are rather split thumbs and that both are underdeveloped. Hence, whichever thumb is retained it will be thinner and shorter than a normal thumb with possible stiff IP joint. However, we reassure the parents that functionally they will be adequate and face no disability. Parents are always happy with making this first visit.

The purpose of the preoperative counselling is to inform the parents that the surgery does not involve just removal of one of the thumbs, but rather utilization of structures of both the duplicated components to reconstruct the best possible single thumb.





*A child with similar type of thumb duplication*



*The hand after excision of the extra thumb at Ganga Hospital.  
The retained ulnar thumb was reconstructed with the tissues from the excised thumb.*

## Hand Vignettes



*Photo captured at Coimbatore, Tamil Nadu.*

Congenital Malformations in Cattle  
 Congenital malformations are not uncommon in the animal world. They are of special interest for various reasons. Often these animals are considered as non-artificial study models that can be used to identify the clinical bases and treatment approaches to diseases. The study findings can be translated from animals to humans. Congenital malformations in cattle may be identified by farmers, veterinary doctors or veterinary pathologists. The etiology can be genetic or non-genetic (toxic, nutritional, infectious). Identifying genes associated with foot and leg malformations is crucial for enabling selective breeding of animals that are less prone to these conditions. This approach not only ensures healthier herds but also enhances productivity significantly.

The calf in the image has Forelimb Polymelia (extra legs). This can be due to the incomplete development of conjoined twins. The other possible etiological factors are spontaneous (de novo) or inherited genetic mutations, exposure to harmful substances or radiation in the womb, and maternal injuries that negatively impact foetal development.



Lupines contain teratogens that can cause foetal malformations. They are a type of legumes with beautiful flowers. When eaten by a pregnant cow during the critical period of gestation, the foetus can develop arthrogryposis (crooked limbs, fused joints) or cleft palate. Often plants with toxic alkaloids cause birth defects in foetus.

## Recent Publications

We are pleased to share our recent publication of a case report wherein we have explained our experience in making a large abdominal flap in a 41-day-old child, which probably is the youngest child to receive that surgery in the world.

Case Report

### Pedicled Abdominal Flap in the Youngest Patient Yet? A Case Report of a Newborn with Neonatal Compartment Syndrome

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Indian J Plast Surg

**Abstract**

**Keywords**

- neonatal compartment syndrome
- fasciotomy
- pedicled flap
- children
- abdominal flap

Pedicled abdominal flaps continue to be popular in most parts of the world for covering soft tissue defects of the upper limb. There is apprehension if distant pedicled flaps can be used in children for fear of disruption. We recently had a newborn baby with neonatal compartment syndrome (NCS) of her left upper limb in whom a pedicled abdominal flap was successfully used to cover the raw area in the forearm at 41 days of life. A severely swollen limb with ischemic skin lesions associated with lack of motion of the upper limb often points to NCS. Since no guidelines exist for the diagnosis and management of NCS, a high index of suspicion and urgent fasciotomy are required to limit its sequelae. Our patient had an emergency fasciotomy elsewhere was referred to us with a precariously viable limb for salvage. The raw area in the forearm with exposed bone was successfully covered with a pedicled abdominal flap at 41 days of life. Our patient is probably the youngest patient ever to receive a pedicled abdominal flap.

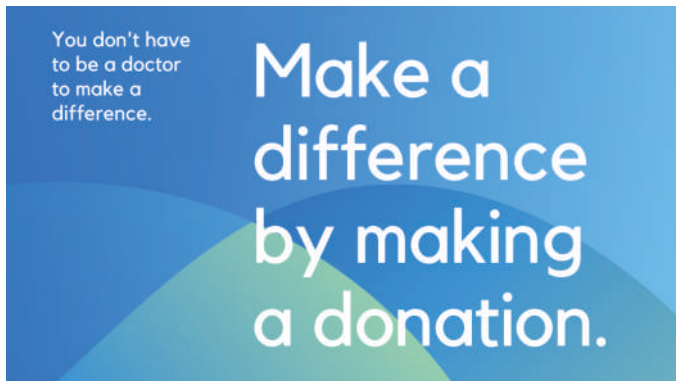
*Pls use the link to read the open access article published in the Indian Journal of Plastic Surgery, <https://www.thieme-connect.com/products/ejournals/html/10.1055/s-0044-1801788>.*



## 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.**

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.

### 2026 World Congenital Symposium of Congenital Malformations of the Hand and Upper Limb.

**February 25 - 28, 2026**  
Ganga Hospital, Coimbatore

This is the first time this will be held in this part of the world. Please mark the dates in your calendar.

Includes a Live Operative Workshop.

Contact : [rajahand@gmail.com](mailto:rajahand@gmail.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 below.

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