

# A PROVIDENTIAL RARE ESCAPE “LIFE BACK FROM THE WILDERNESS”

*Challenges of reconstructive plastic surgery – A case study*

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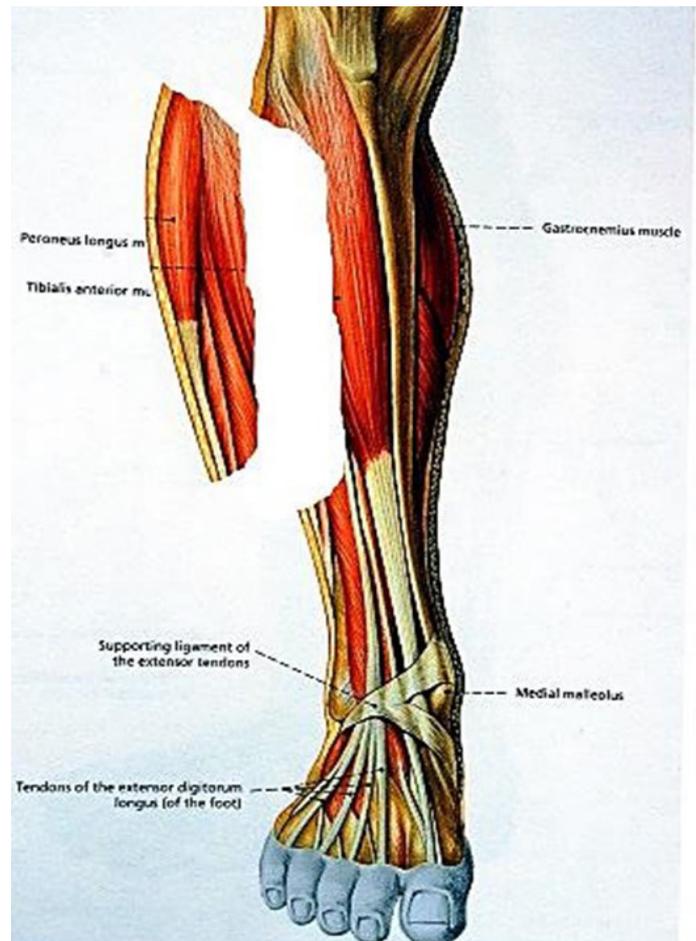
This is a vivid account of how this blessed three hours old baby was snatched away from the jaws of a monster, by the field workers at the village near Varanasi in a grave life-threatening condition, on July 31, 2003 and his eventual journey to the normality. He was further assaulted and being mauled by wild beasts. The entire thigh and the calf muscle of his right leg being chewed off and left bleeding profusely at the mercy of “the Hand of God”. The newborn was initially treated at the Institute of Medical Sciences, Varanasi for primary intensive surgical care. Thereafter, he was referred to Mumbai for definitive Reconstructive Micro-neural and vascular surgery aimed at the functional reconstitution.

On arrival, the evaluation delineated extensive damage to the blood vessels, muscles, common peroneal nerve and skin in the thigh and the calf region. Compounding the extensive nature of the soft tissue injuries were the risks associated with prolonged anesthesia in this age group. Definitive surgery involved a complete freeing of all the scarred tissue, replacement of the lost muscle and skin bulk along with restoration of continuity of the damaged segment of the nerve/vessel using microsurgical procedures (“Eighteen hour”). He stayed in the hospital for almost 16 months including celebration of his 1st birthday in the hospital. Subsequently at the age of around 11 years, he was reassessed for the growth discrepancies and realizing the need to reinforce the strength and the volume of the calf muscles, a sophisticated and specialized free functioning muscle transfer (FFMT) procedure was undertaken in supra major surgery involving orthopedic surgeons, micro surgeons and the complete ICU back for post-operative care (28 hour long procedure).

To summarize initial conditions to begin with and surgical steps:

On arrival at the Hospital at Mumbai:

- Poor general condition of the patient
- Extensive Post Traumatic scar in the popliteal region and the anterior-lateral-posterior part of the calf/leg region.
- Marks of the multiple animal bites on the outer side of the thigh and leg
- Loss of distal pulsations of the Anterior Tibial/Dorsalis Pedis Vessels
- Loss of Lateral Popliteal Nerve function
- Loss of the head / proximal shaft of the Fibula
- Talipes equino varus (TEV)/or due to loss of function/ muscle bulk of the muscles of the lateral compartment/ un-opposed action of the muscles of medial compartment.
- Limb Length discrepancy





**1st Stage: 25th July 2004**

- Excision of the adherent scar and release of fibrous tissue
- Microscopic exploration of the popliteal vessels and identification of the blockade / loss of continuity of the popliteal artery
- Microscopic exploration of lateral popliteal nerve and identification of the proximal / distal cut ends of the lateral popliteal nerve.
- Excision + release of the contracture on the leg and the calf region.
- Fascio-cutaneous rotation advancement flap from the Leg + Skin graft.

Immediate post-operative recovery was good. The distal circulation improved and the flap survived. All the wounds healed by primary intensions. Thereafter, the patient was reviewed at the SOS Village residence at Varanasi in his own natural surroundings in Sept. 2010;

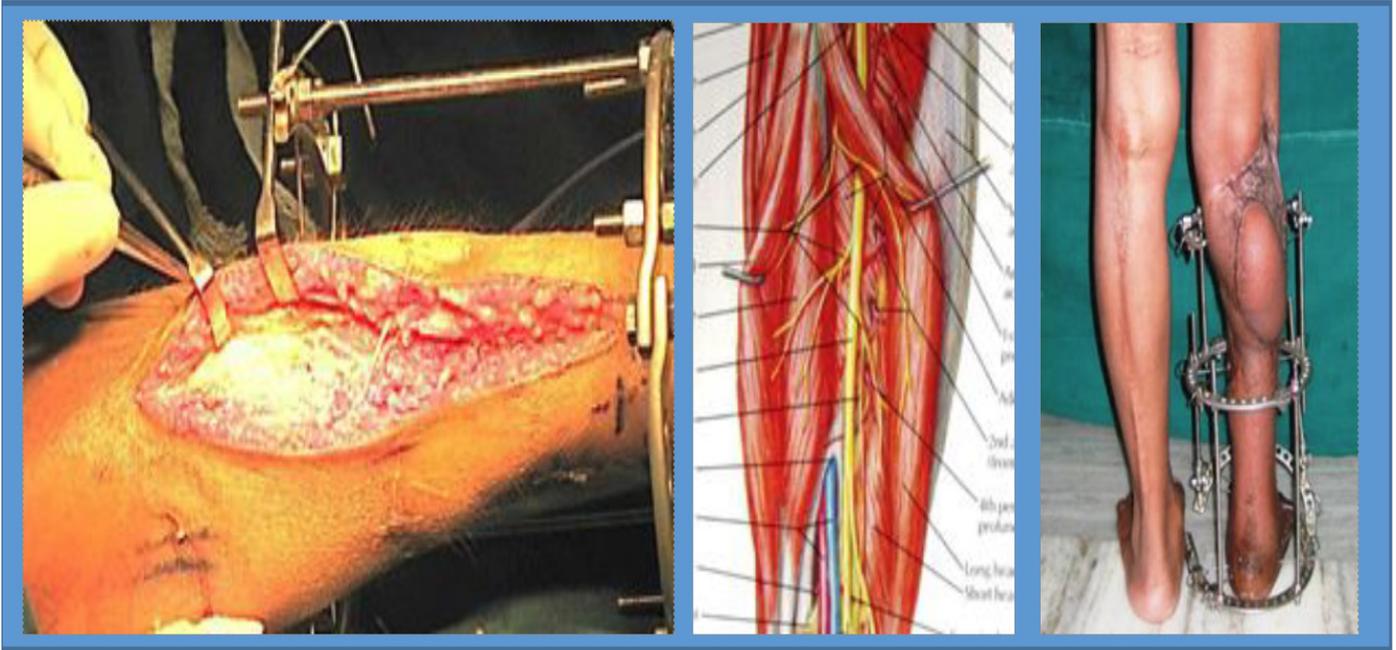
**2nd Stage: 4th October 2014**

- Healthy and elongated (with the age) fasciocutaneous flap + matured SSG
- Post Traumatic hypoplasia of the muscle + soft tissue in the popliteal region and the anteriorlateral-posterior part of the calf / leg region.
- Good quality distal pulsations of the Anterior Tibial / Dorsalis Pedis Vessels (reconfirmed by the MR Angiogram)
- TA shortening + loss of function / muscle bulk of the muscles of the posterior / lateral compartment / unopposed

action of by the muscles of the medial compartment + Limb Length discrepancy

Due to severe hypoplasia of the residual muscle of the region, tight / short TA tendon as well severe soft tissue shortage, it was decided to undertake microsurgical release of the previously repaired popliteal vessels / nerves as well Free Functioning Muscle Transfer as well soft tissue replacement i.e. Lat. Dorsi myo-cutaneous flap. The timing of the procedure was planned so as to take the advantage of the growth spurt in the following years.

- Exploration of the popliteal region and Identification of the lateral popliteal nerve and the sural nerve grafts used earlier
- Identification of the popliteal artery and the vein graft used earlier
- Release of adherent soft tissue and previously placed fascio-cutaneous flap
- Release of the scars around of the hypoplastic muscle + soft tissue in the popliteal region and the anterior-lateral-posterior part of the calf / leg region.
- Re-adjustment of the External fixator to achieve full corrections of the ankle and the foot position to neutral position.
- Harvest of the large Lat. Dorsi myo-cutaneous flap
- Micro anastomosis between the recipient vessels + Flap pedicle.
- Nerve Cooptation between the nerve to Lat. Dorsi + Lat. Popl. Nerve
- Loose fixation of the muscle flap recipient area + Skin graft on the flap Post operatively, he was recovering well. 100% pache of the skin grafts as well satisfactory



healing of all the wounds.

3rd Stage: 24th February 2015

Reviewed for adjustment of the External Fixator and the flap and Additional Neurotization (supercharging) + adjustment of the muscle tension

- Exploration of the popliteal region and identification of the lateral popliteal nerve and the sural nerve grafts used earlier Identification of the artery and the vein anastomosis done earlier
- Release of the adherent soft tissue and previously placed Latissimus Dorsi flap
- Identification and harvest of the splarable branches of the sciatic nerve for supercharging innervation to the transferred Latissimus Dorsi muscle
- Re-adjustment of the External fixator to achieve full corrections of the ankle and the foot position to neutral position.

4TH Stage: 5th January 2016

Reviewed for removal of the External Fixator+ adjustment of muscle tension

- Exploration of the popliteal region and identification of the lateral popliteal nerve and the sural nerve grafts used earlier
- Release of the adherent soft tissue and previously placed LD flap
- Identification and harvest of the splarable semitendinous group of muscles for supercharging the strength to the transferred LD muscle
- Cineplasty (surgical fitting of a lever to a muscle) reinforcement using the TFL strips and tenorrhaphy
- Advancement of the Flap and adjustment of the scar / fibrosis

I am very happy that this boy is now 18 years old and is living a satisfied life like a normal child, he is very thankful to the micro-surgical process as well as to the NGO looking after him so nicely. He has grown as an intelligent and

hardworking boy today, making best of the opportunities at the SOS CHILDREN'S VILLAGE at Varanasi.

This is a gift of micro-surgery to a child which otherwise, despite being unwanted, being thrown at the tender age of three hours and despite being attacked by the wild animal, has survived. Eighteen years after a newborn boy was abandoned in the sugarcane fields and was mauled by a wild animal, with a path-breaking surgery to reconstruct his tattered leg.

The boy who was left deserted in a sugarcane field to die was in actuality born with a "HAND OF GOD" that brought him to the right place at the right time. It's a miracle to save a limb, to save a child which could be achieved only through the reconstructive surgery. He grew up with extensive damage to the blood vessels, muscles, nerve and skin in the affected leg.

He is 17 years old, a cherubic boy, recovering happily at the SOS CHILDREN'S VILLAGE at Varanasi.

"Life is a journey of either Fate or Destiny and each of us has a specific journey from God that redefine our lives or diagrams being shared, and equip us for the very purpose we were designed"

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