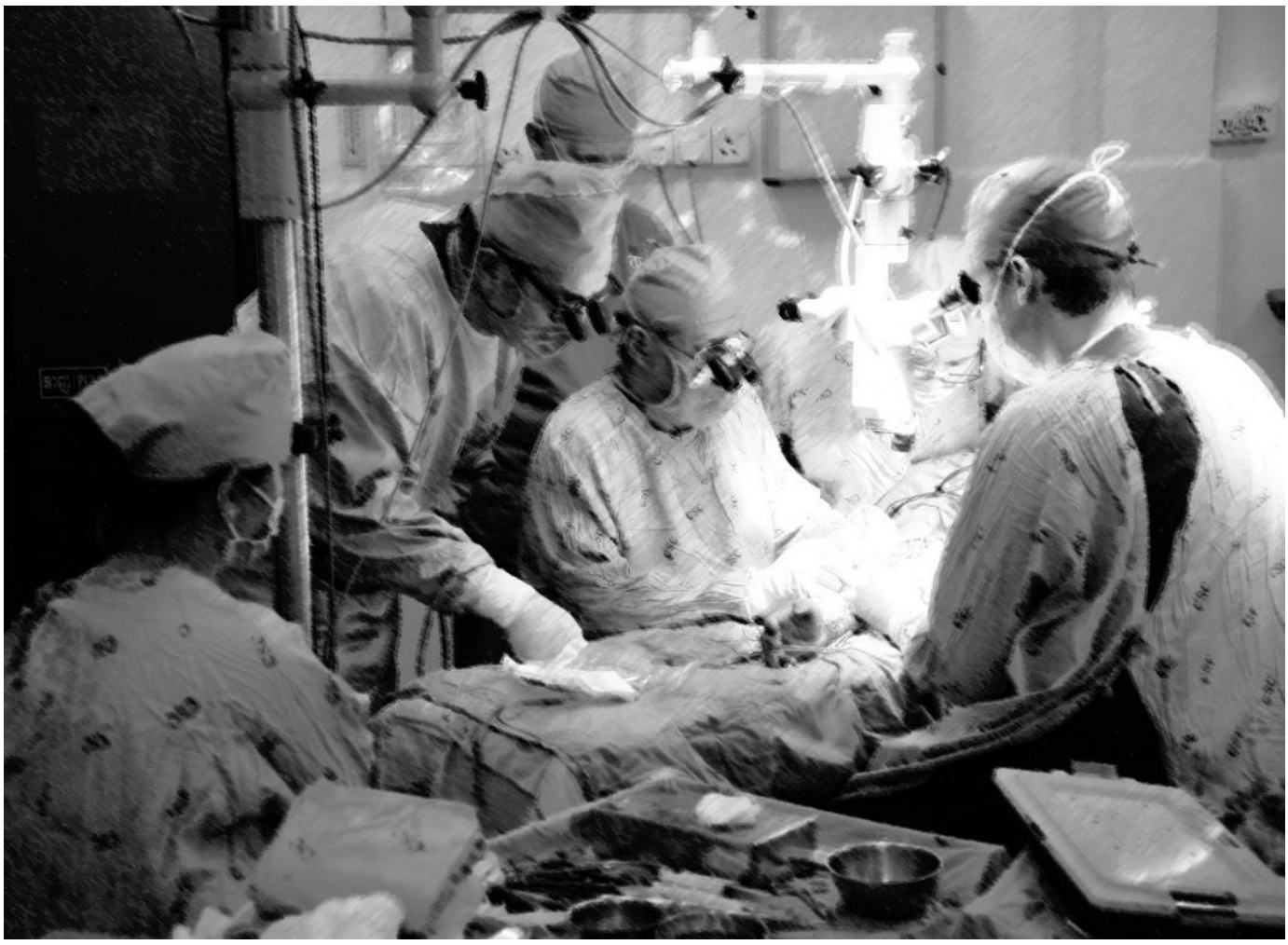
Report of the Upper Limb Team 2014
mission to Phnom Penh Cambodia.

Supported by:

- IFSSH
- AHSS
- Orthopaedic Outreach



Executive Summary:

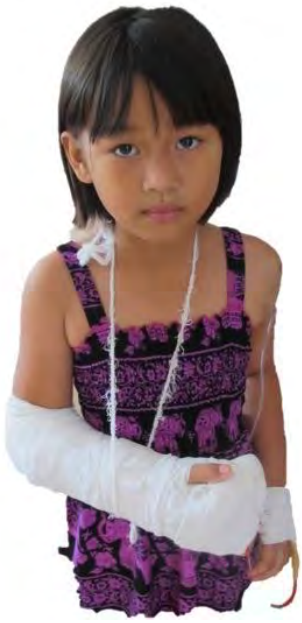
Building on the strong foundations laid by prior Upper Limb teams led by Graham Gumley, including contributions from Des Bokor, Damian Ireland, Mark Allison, Ricaredo de la Costa, Jennifer Green and Nigel Symons, the 2014 team arrived some days before commencing surgery in order to adequately evaluate the patients recommended by our collaborating hospitals and to efficiently plan for optimal surgery and teaching opportunities.

More than 100 patients were evaluated at the National Paediatric Hospital, Children's Surgical Center, Sihanouk hospital Center of HOPE, Kossamak Hospital and the Preah Ket Milea (Military) Hospital. Working with our Cambodian counterparts, with a focus on training and technology transfer, 35 operations were carried out, ranging from relatively simple finger releases, through uncorrected congenital deformities to complex Brachial Plexus reconstructive operations and a successful free tissue transfer for a patient who had already had a number of failed advanced surgeries.

The team were pleased to be invited back to provide two afternoons of lectures at the University of Health Sciences (UHS), teaching the national cohort of surgeons in training. A meeting with the Vice Dean of the UHS confirmed an invitation to assist in 2015 with the Orthopaedic education of a special medical school class whose education is being conducted in English and French with the intention of encouraging international experience for the benefit of the country.

The team's wider activity included a number of tutorials and patient care evaluations by Dr. Anne Wajon PhD, and Cathy Merry, Senior Hand Therapists; administration and HR evaluation and tutoring at one of the partner hospitals (SHCH) and a site evaluation visit to a facility in Kampot where future mission trips may also be engaged.

The team remained healthy overall, and continued the tradition of strong teamwork, solid and new friendship development, a spread of seniority and experience with a commitment to providing high quality surgical care to those in need with a priority placed on technology transfer and skills training.



We are grateful to the Ministry of Health, Kingdom of Cambodia for allowing us the privilege of working with the national surgical leadership, the administrations of our partner hospitals and the Cambodian Orthopaedic Society for their collaboration and facilitation of local arrangements.

Dates: Thursday August 7 to Saturday August 16, 2014

Local Partners:

- Sihanouk Hospital Center of HOPE
- National Paediatric Hospital, Phnom Penh
- Children's Surgical Centre, Phnom Penh
- Military Hospital (Pheah Keto Mealea Hospital)
- Kossamak Hospital
- Sonia Kill Hospital, Kampot
- University of Health Sciences, Phnom Penh

Goals of the 2014 program:

- To build on the groundwork of the prior mission trips in 2008 through 2013, furthering surgical training and advancing patient care in Phnom Penh and further afield, particularly in the field of Upper Limb Surgery.

- Continue collaboration with the University of Health Sciences, Phnom Penh in providing a structured lecture program for surgery trainees.

- Provide administrative support and advice as requested, to local partner programs, surgical society and University.

- Evaluate additional programs for suitability for future mission team activity.

International Team membership:

Assoc. Prof. Graham J. Gumley (AHSS)
Prof. Neil Jones. (ASSH)
Assistant. Prof. Roongsak Limthongthang (Thailand)
Dr. Damian Ryan (AHSS)
Dr. Nicholas Smith (AHSS)
Dr. David Stewart (AHSS)
Dr. Ben East, Orthopaedic Upper Limb Surgeon
Dr. Anne Wajon, Hand Therapist (IFSHT)
Cathy Merry, (AHTA)

Admin support (Part time) Mrs. Suzanne Gumley

Local Partners:

Name	*Role*	*Hospital*
Prof. Vuthy CHHOEURN, M.D.	Head, Department of Pediatric Surgery	National Pediatric Hospital
Dr. Jim Gollogly	Director	Childrens Surgical Centre
Prof. BOUNCHAN Youttiroung, MD	Vice-Dean for Post-Graduate and International Affairs	Faculty of Medicine University of Health Sciences
Prof. SOK Buntha	Director, Orthopaedic Surgery	Calmette Hospital
Prof. Doung Bunn	Director, Orthopaedic Surgery	Preah Kossamak Hospital
Dr. Ry Sina	Orthopaedic and reconstructive surgeon	Preah Kossamak Hospital
Dr. Sin Phot	Director, Orthopaedic Surgery	Sihanouk Hospital Center of HOPE

Brief outline of activity:

Thursday August 7:

Surgical team arrives in Phnom Penh.

Friday August 8:

Team divided into two groups to facilitate patient evaluation at:

- Sihanouk Hospital Center of HOPE (SHCH)
- National Paediatric Hospital, Phnom Penh
- Children's Surgical Centre, Phnom Penh
- Military Hospital (Pheah Keto Mealea Hospital)
- Kossamak Hospital
-

Late lunch meeting at SHCH to discuss cases, and provision scheduling for the following week. Continued consultations in the afternoon.

Schedule of patient evaluation:

Hospital	**Consultations**	**Surgeries**
Sihanouk Hospital Center of HOPE (SHCH)	**25**	**9**
National Paediatric Hospital	**17**	**6**
Children's Surgical Centre	**60**	**17**
Military Hospital (Pheah Keto Mealea Hospital)	**3**	**2**

Kossamak Hospital	**3**	**1**
Total	**108**	**35**

Monday August 11 through Friday August 15:

Surgical cases in collaboration will Cambodian counterpart surgeons at:

- Sihanouk Hospital Center of HOPE (SHCH)
- National Paediatric Hospital, Phnom Penh
- Children's Surgical Centre, Phnom Penh
- Military Hospital (Pheah Keto Mealea Hospital)
- Kossamak Hospital

Hand Therapy consultation, treatment and education of local counterpart Physiotherapist at:

- Sihanouk Hospital Center of HOPE (SHCH)
- National Paediatric Hospital, Phnom Penh
- Children's Surgical Centre, Phnom Penh
- Kossamak Hospital

Thursday August 14 and Friday August 15:

Afternoon lecture program at the University of Health Sciences to the cohort of surgical trainees.

Thursday August 14:

Evaluation visit to the Sonia Kill Hospital, Kampot, Cambodia. (vide infra)

Saturday August 16: Team departs.

Budget and reconciliation

	Budget	**Actual**
Airfare, (Australia)	9,450	9,590
Airfare USD	3,000	1,700
Transit Accommodation	1,660	0
Phnom Penh Accommodation	8,300	5,140
Meals	2,490	1,217
Transportation	665	505
Communication	0	68
Insurances	400	400
References	0	30

Total:	(USD)	**25,965**	**18,650**

Société Cambodgienne d'Orthopédie et de Traumatologie

Siège Social : Hôpital Calmette
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Secrétaire : Tel : (855) 16922616/(855) 77 23 25 24
Email : socotkh@yahoo.com

September 5, 2014

Assoc. Prof. Graham J. Gumley
Macquarie University
Clinical Assoc. Prof. Sydney University,
Adjunct Assoc. Prof., School of Rural Medicine, UNE
Conjoint appointee, UNSW

Re: The Australian Hand-upper limb surgical mission to Cambodia, 2014

Dear Prof Graham Gumley,

I am writing, on behalf of the Board of Directors of the Cambodian Society of Orthopaedics and Traumatology (SOCOT), to express our thankfulness to the Australian Hand-Upper limb missionary surgical team to Cambodia for your kindest and continuous support to our local hospitals and medical school.

This year marked again an important step of your great support and collaboration to the improvement of trauma-orthopaedic care in Cambodia. Approximately most complicated 36 upper limb cases have been operated in different hospitals by your team. These works offered not only healing and great hope to these desperate patients, but also unique practical experiences to our local surgeons and trainees. Moreover, team's lectures at the medical school were very interesting and fulfilled our lacking knowledge so far.

Every hospital where the team worked, reported good immediate post-op results of all operated cases. All of us praised this educational mission very much.

Following your meeting with Prof. Bounchan Youttiroung, MD, Deputy Dean for Postgraduate & international relations, we deeply appreciate your team's efforts to contribute to Orthopaedic training within the curriculum of the University. We hope to have closer collaboration, between persons, teams and both countries universities in the near future.

On behalf of the SOCOT, local surgeons, patients, their families and medical school, I would like to extend my deep gratitude to the Australian surgical team and the Australian hand society for your kind support and your commitment to the improvement of orthopaedic patient care in Cambodia. We request such an educational trip to Cambodia to be continued in the coming years.

We look forward to continuous collaboration of the orthopaedics associations and medical schools of both countries, Australia and Cambodia.

Best regards,

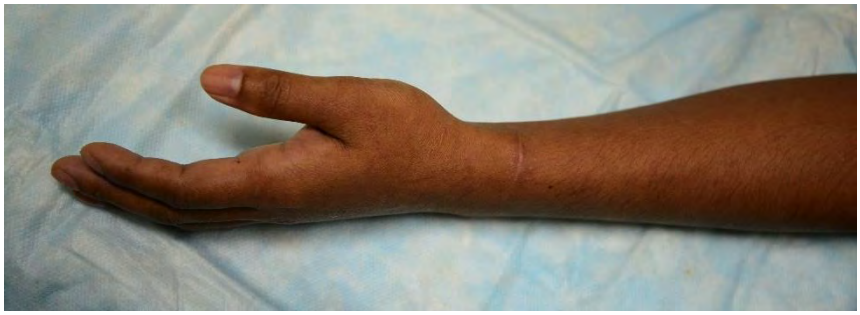
Prof. CHHOEURN Vuthy, M.D.
President,
Cambodian Society of Orthopaedics and Traumatology

Detailed hospital reports:

Sihanouk Hospital Center of HOPE

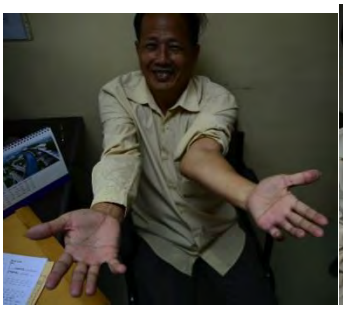
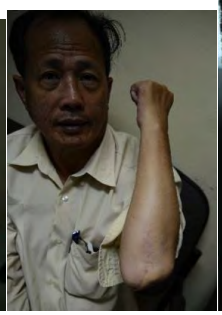
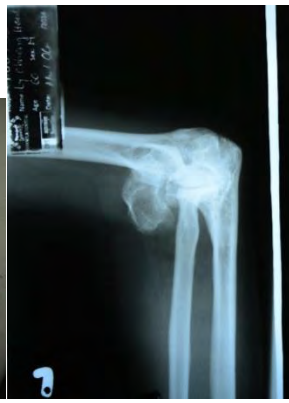
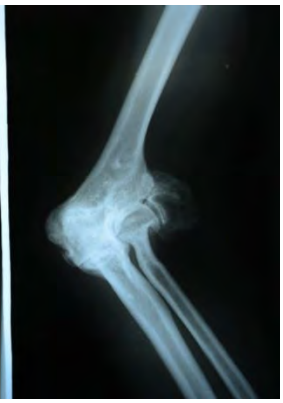
Friday 8 August 2014 Patient evaluation

1. **L S** – 27F 8 years after cut wound at 1st extensor compartment Lt wrist. **Plan:**



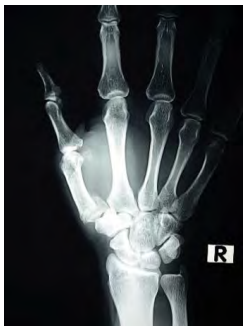
Neuroma excision, secondary repair superficial radial nerve

2. **L C H** – 60M Old valgus deformity from left elbow injury (nonunion of the lateral condyle) with tardy ulnar nerve palsy for the last 3 years. Anterior ulnar nerve transposition has been done 3 months ago. Pain and sensation are improved. No improvement of motor function yet. Patient has essentially good elbow motion with F/E 105°/30°, and S/P 50°/90°. He also has smoothly stable painless elbow motion.
   Plan: Attending doctor would like to wait for the recovery of the ulnar nerve before considering tendon transfer for ulnar claw hand. Even with the obvious deformity of the elbow, patient currently has decent and stable motion. So right now, he may not need any further operations for the elbow, which may destabilize or deteriorate the motion.

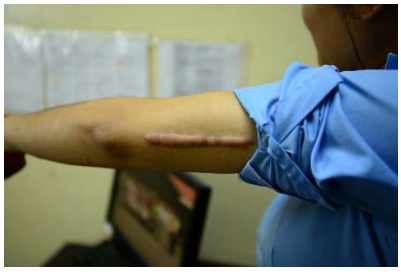





3. 34F with left lateral elbow pain for 2 weeks. She has been treated by tennis elbow splint. She has maximum tender spot at the lateral epicondyle and some tender over the radial tunnel. She has negative finger extension test. Intact radial nerve function.
   Treatment: Advice eccentric and stretching exercise. Discontinue tennis elbow strap.

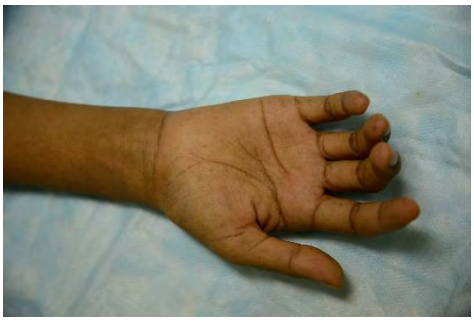
4. 31M – 10 weeks after extraarticular base of thumb metacarpal fracture. He has slightly pain during active ROM. X-ray shows acceptable fracture displacement with partial healing.
   Advice: Start ROM exercise with removable protective splint.

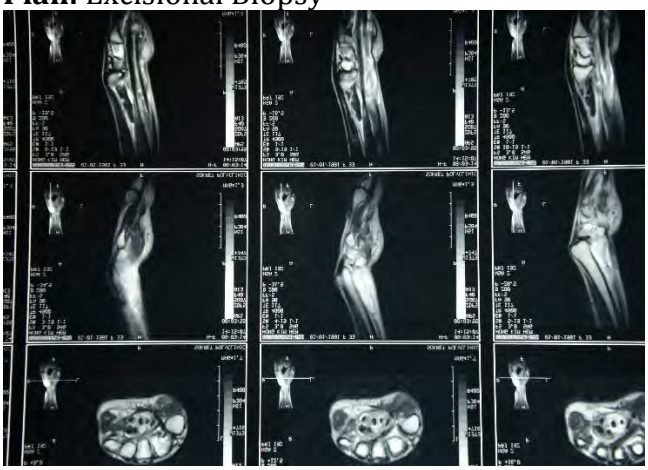


5. 20F – 1 year after ORIF humerus. Consult plastic for opinion about keloid excision.



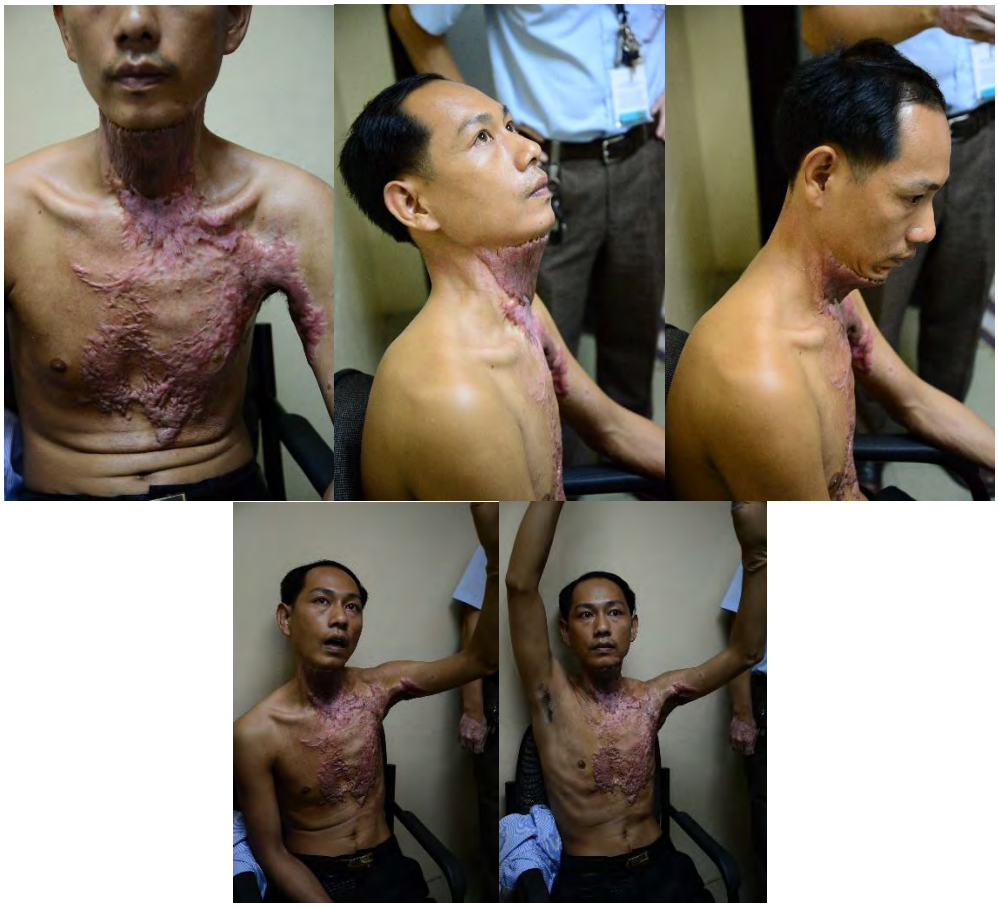
6. **H K M** – 33F painful growing mass right wrist for 1 year. There're 2 x 3 cm. mass proximal to wrist crease and 0.5 x 0.5 cm mass along Index flexor tendon. Slightly tender and radiated pain from wrist to index finger. Negative Allen test for ulnar artery.
   Likely to be TB
   Plan: Excisional Biopsy



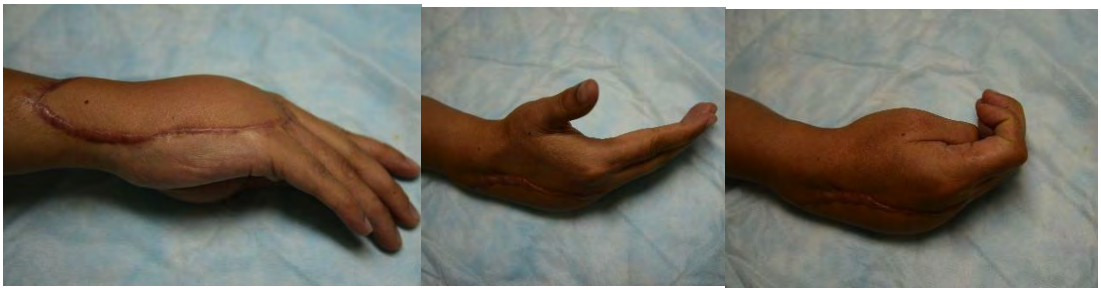


7. 66M – Left shoulder subacromial impingement syndrome. Pain improved after steroids injection 1 month. Advise exercise.

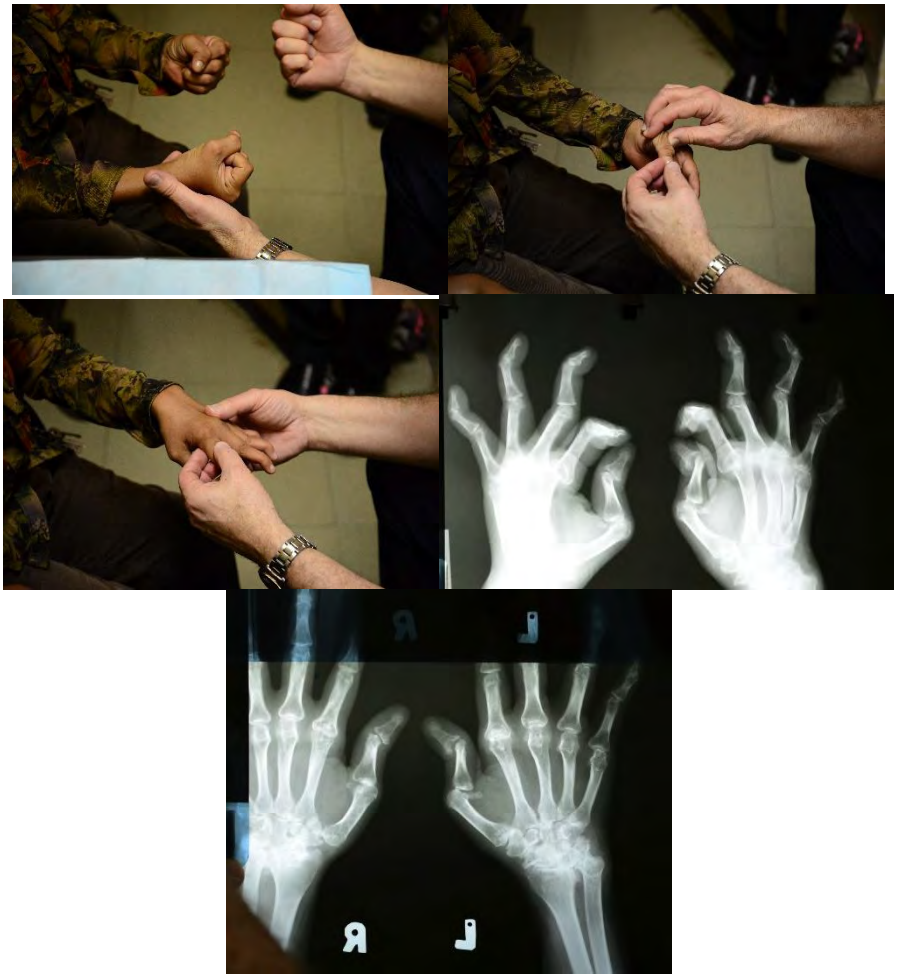
8. **H N** – 34M 6 months after petrol burn injury. Scar contracture limits neck extension and left shoulder abduction. Some improvement after pressure glove and soft collar splint.
   Plan: Hard collar. Contracture release and FTSG.



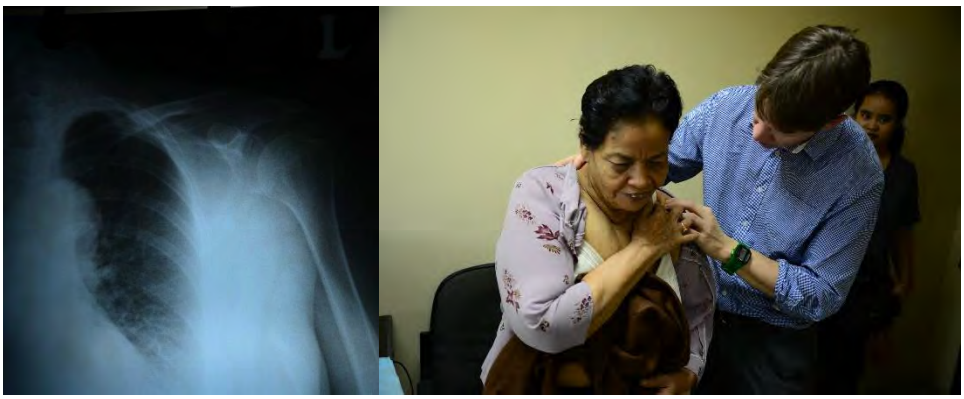
9. **S H S** – 28F Open injury dorsal right hand with scar and loss of extensor tendon from index to little fingers. She has undergone scar excision and coverage with radial forearm flap, MCP capsulectomy last year (David Stewart).
   Plan: Extensor tendon grafts with repeated MCP capsulectomy



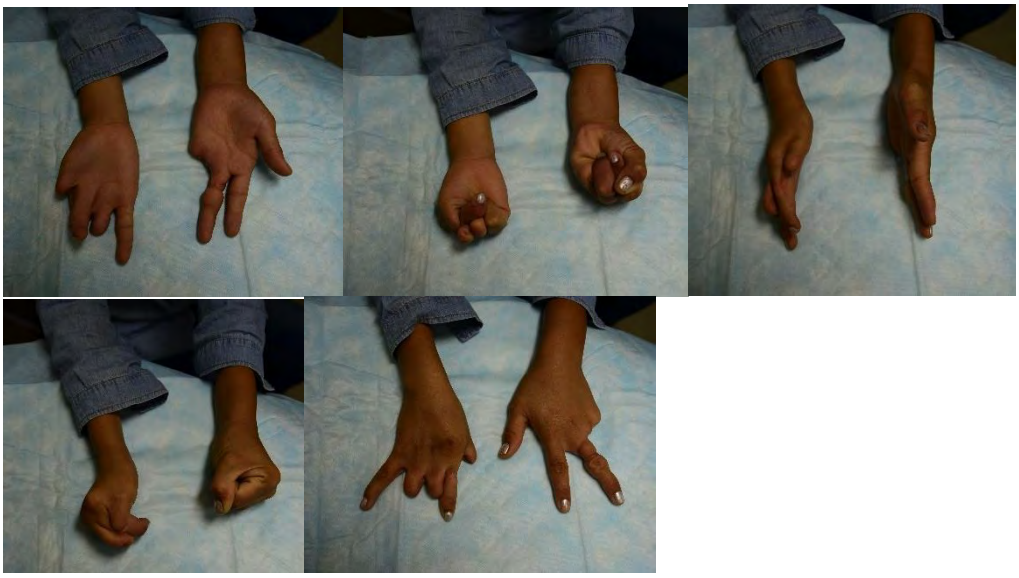
10. **S V** – 39F RA, DM Rheumatoid hands, wrists, and both hips.
    Plan: May need hip replacements done before hand surgeries.



11. 74F – Lt shoulder impingement syndrome. She is not better after 1st steroid injection. Lt shoulder ER 20° and positive ER lag. IR to Iliac crest. Diagnosis is rotator cuff insufficiency and secondary frozen shoulder.
    Plan: PT to increase ROM and intracapsular injection.



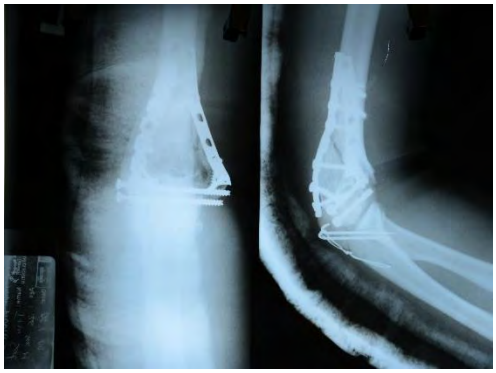
12. **K R**. 14yo girl. Ring constriction band. Prior release right web 2 and 3 major tissue defect right first web.
    Maximum benefit will be from Z plasty left middle finger.
    Patient requests right first web deepening with skin graft.



13. 30 male right handed seller. 7 months after moto accident. Left shoulder pain. Pain and crepitus. Subacromial crepitus.
    Plan. Injection

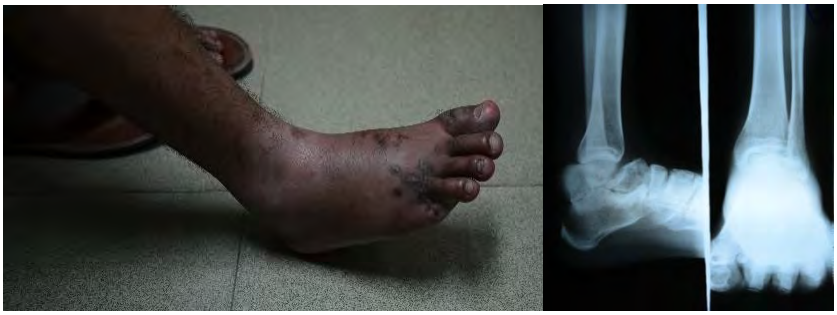
14. **S T** - right index trigger finger. Plan OR Mon or Tues

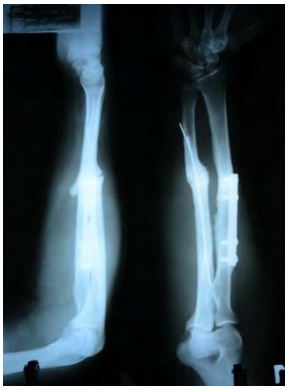
15. 26M – Intercondylar fracture left distal humerus s/p ORIF with plate and screws for 1 week.
    Plan: PT for splint & ROM exercise



16. 60 yo male with left Subacromial bursitis. Plan injection.

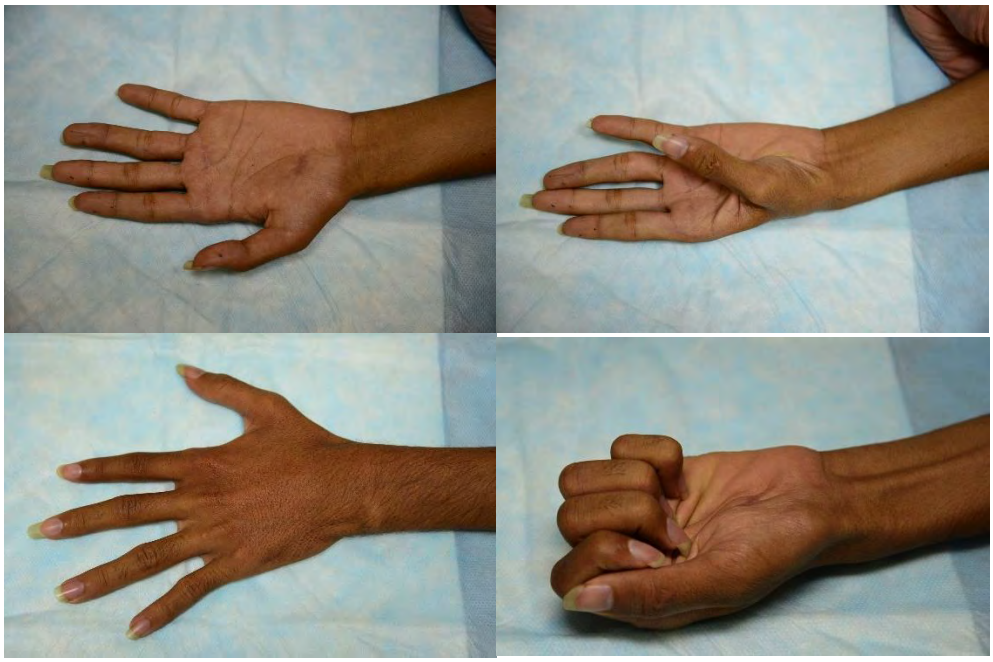
17. 23 yo male. Driver. Right talus fracture.
    4 months after moto accident. Cast treatment. No surgery yet.
    Dislocated talus.
    Can walk 30 mins. Can stand on one foot. Plan. Advice from foot surgeon.



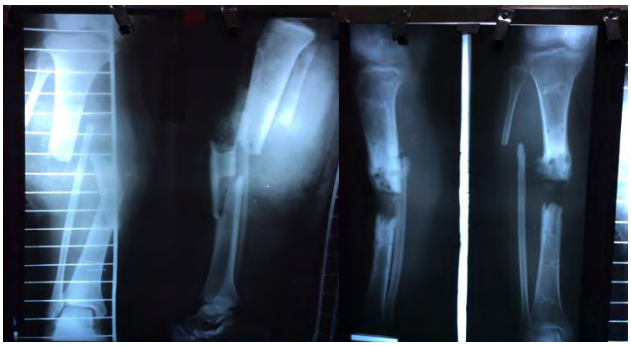


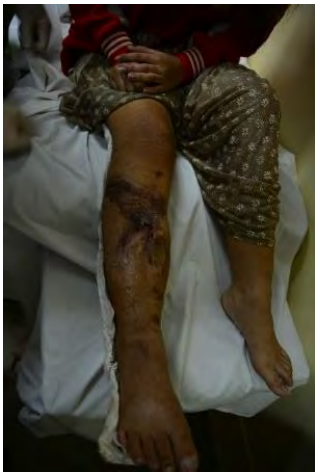
18. 42 yo male. OR 2001 SHCH. ORIF Left both bones forearm. Ulna oligotrophic non union. Stable Ulna Non union. Photo
    Crepitus ++ over radial plate.
    Minimal ulnar symptoms.
    Plan remove plate radius only.

19. 21yo male. Laceration left palm. Sutured locally. Median nerve laceration. Most Flexors clinically intact.
    FDS Middle finger clinically divided.
    Plan median nerve repair. ? Index tenolysis/possible tendon transfer.

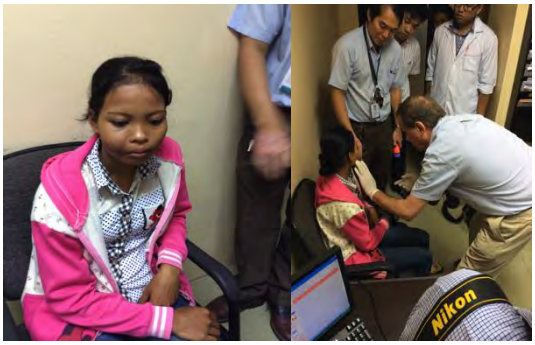


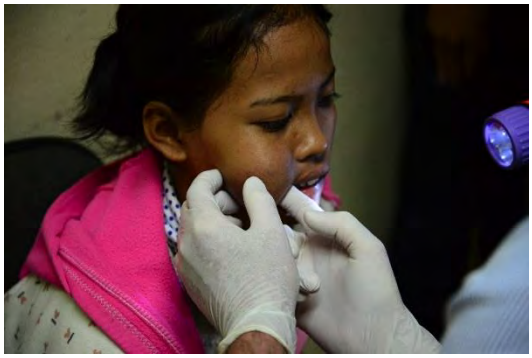
20. **A S** 16 yo woman. 1year after moto accident. Battambang. OR 3 times. 9 months in hospital.
    Right tibial non union with defect.
    Plan: Masquelet technique. Dr Phot has had experience with 12, Dr. Rae Syna approximately 100.



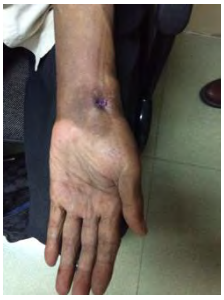


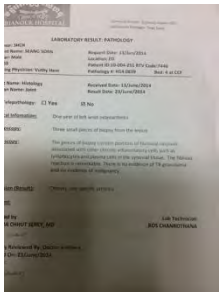
21. 16year old girl with right cheek mass since age 4. Slow increase in size. Multiple consultations
    Needs angiogram. May be suitable for embolization.

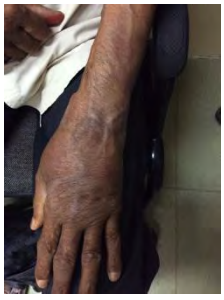


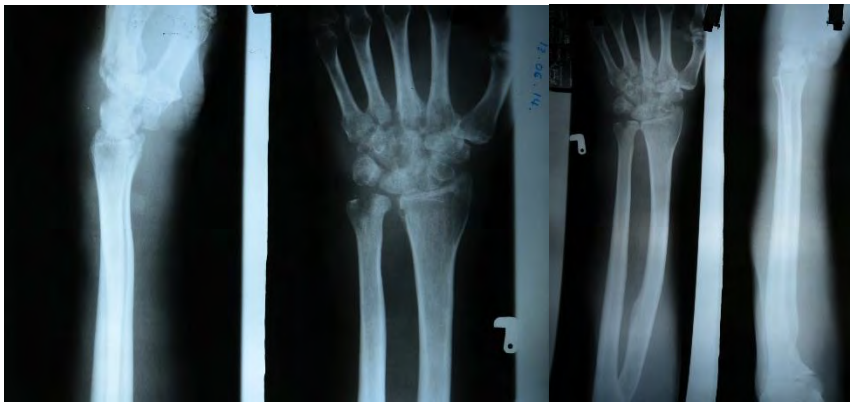


22. 65 yo HIV left wrist two sinuses. Swab neg for TB.
    Needs debridement. Culture. Likely to be TB

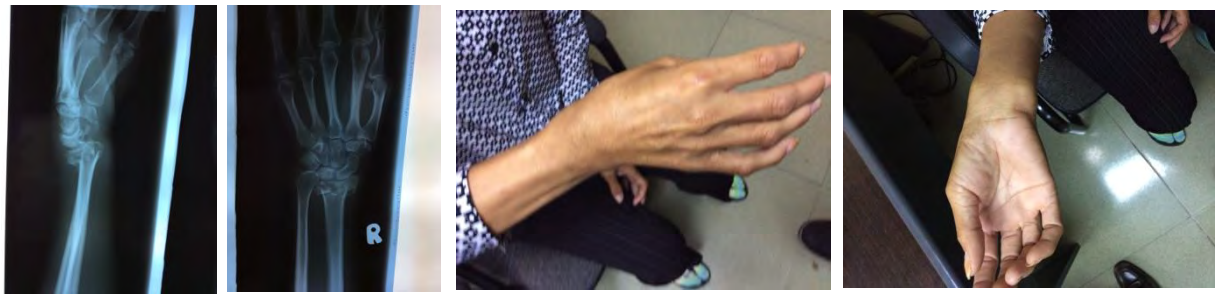








23. **O S -** 47 yo woman. Moto accident. 5+ weeks after unreduced left distal radial fracture.
    Plan: ORIF +/- bone graft.

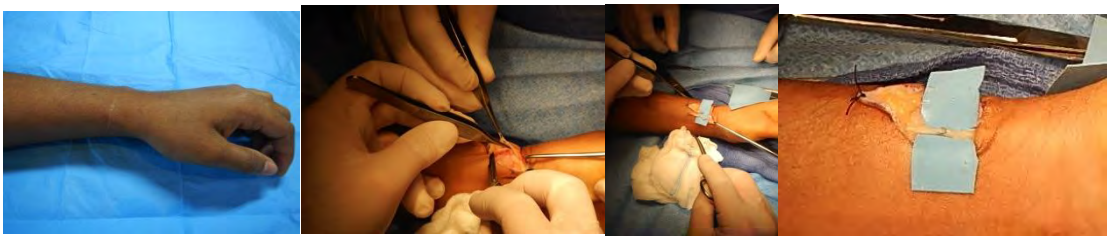


Monday 11 August 2014

Rounds with Dr. Ley and surgical team.
Breast cancer patients x 2
Pelvic #, left pubic rami and SI joint: in traction (photo)
DM with foot ulcer VAC
35 yo male with bladder cancer - Cystectomy and diversion (Dr Sopheap)

Community Medical Centre (CMC) SHCH: OR

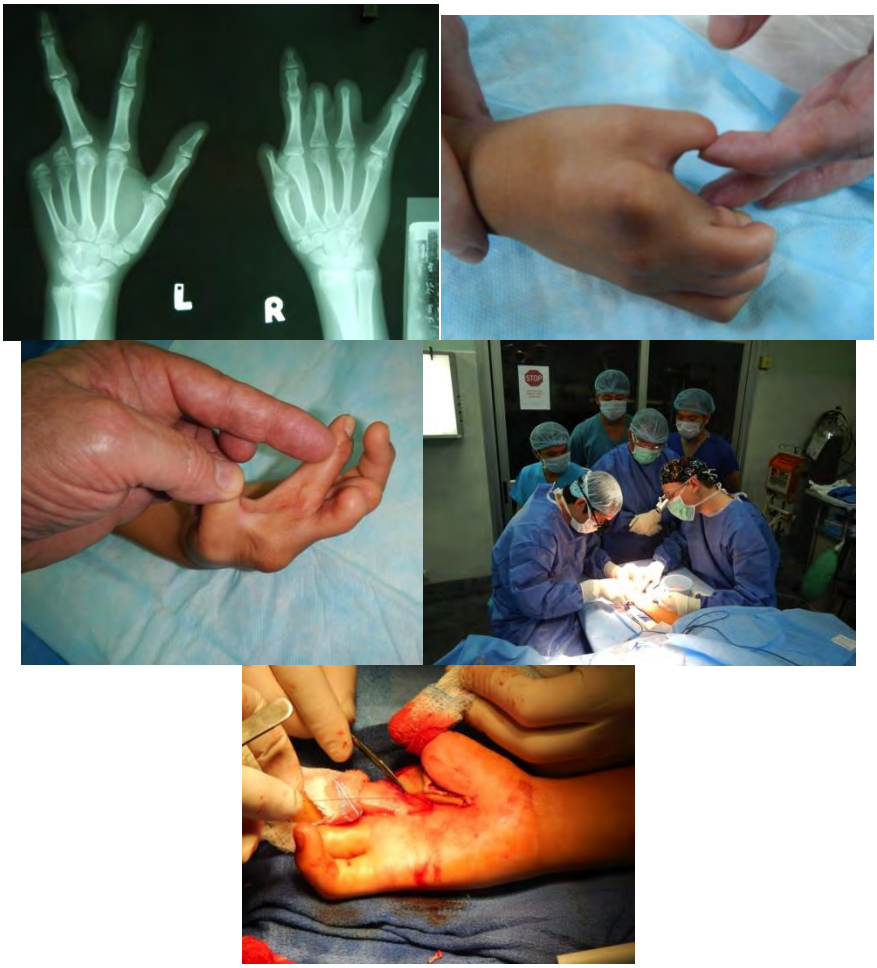
#1 LEM Sarun
Left radial sensory nerve neurolysis and excision neuroma with repair x2



Patinet evaluation:
Review ulna ORIF ? Plate removal
Chau Socheatta - Galleattsi fracture. Excellent result.

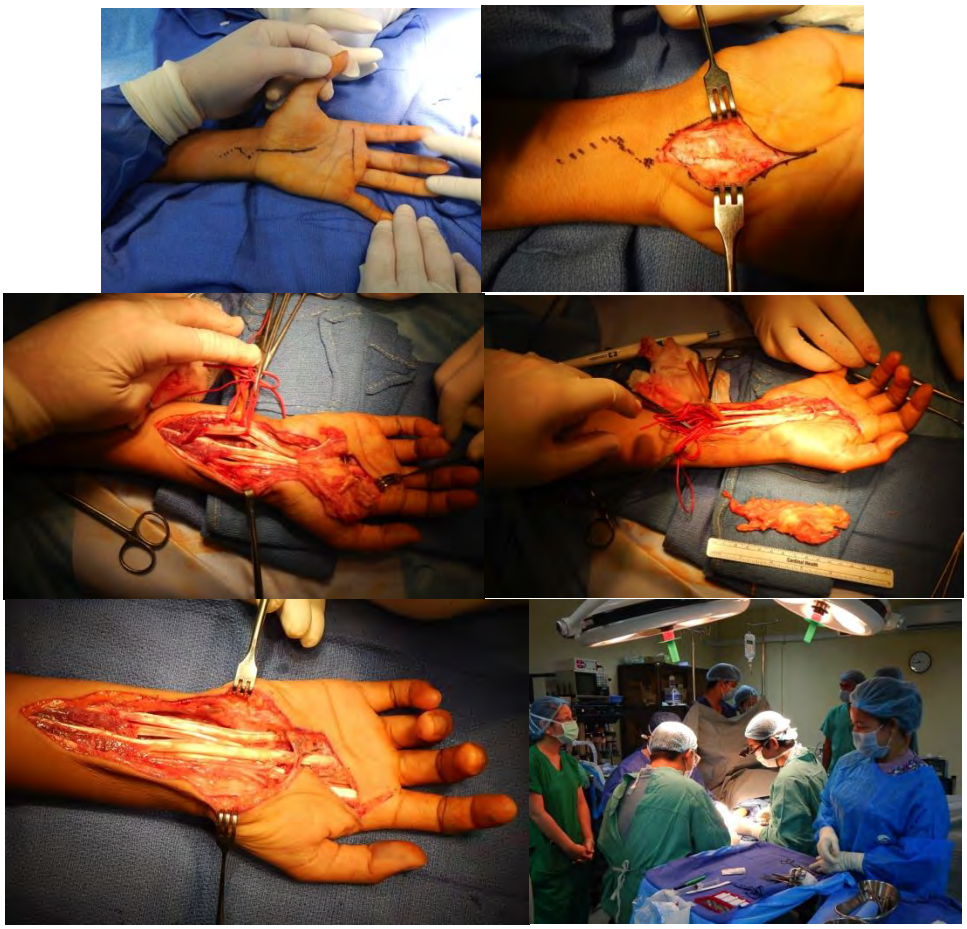
OR SHCH

#2 Sokah Tea - right index trigger finger.
#3 Keo Randy -14 yo girl. Left middle construction ring release.
Release and FTSG Right first web.



Tuesday12 August 2014

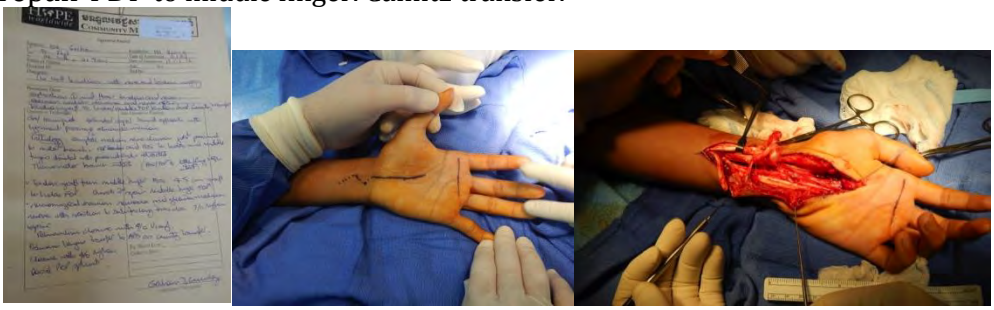
#4 **HONG KOE MHEM** 33 yo woman with right flexor synovitis: Synovectomy ? TB .



#5 Right distal radius late (6 weeks) ORIF. Plate and K Wire.

Wednesday 13 August 2014

#6 OR for left medial nerve repair and tendon graft index FDP and secondary repair FDP to middle finger. Camitz transfer.



Thursday 14 August 2014 SHCH

#7 David Stewart in OR with Dr. Phot for Extensor tendon graft and MCP releases patients with radial forearm flap from prior visit.

Meet Rheumatologist at SHCH.

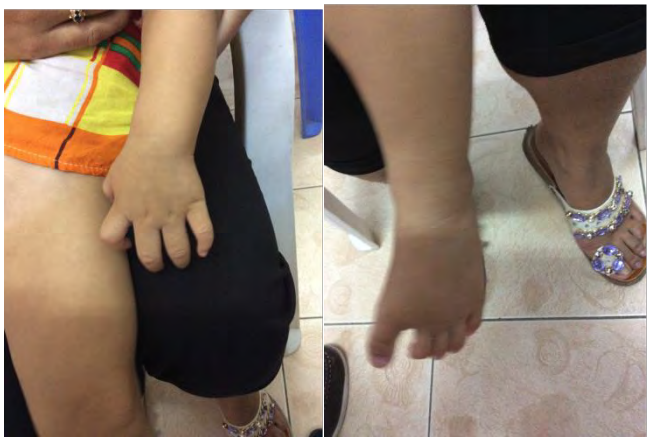
Friday 15 August 2014

#8 GG - SHCH Ganglion aspiration
#9 De Quervains Synovitis injection.

National Paediatric Hospital, Phnom Penh

Friday 8th August

1. 18/12 m. Syndromic, microcephalic, cryptorchidism, bilateral mild hand and toe anomolies Thumbs small - thenars ok, cmc ok, mp stable
Faux agenesis extensors, no contractures. Left epl seen to function.
? Anything to do- observe. (Peed on me).

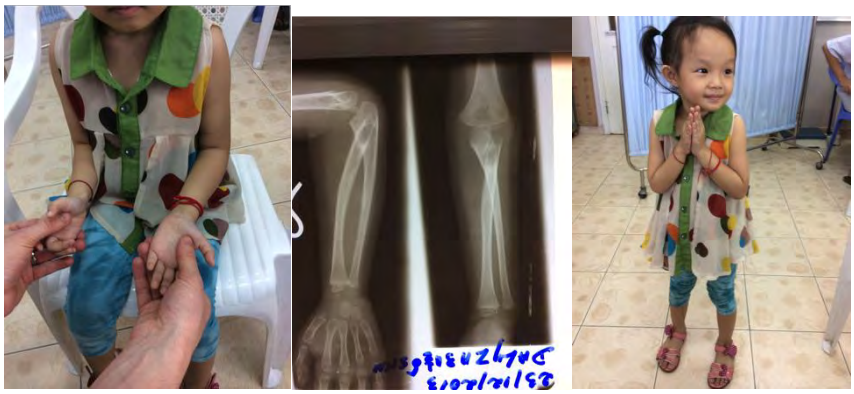


#2. 2yr3 mo right upper extremity weakness

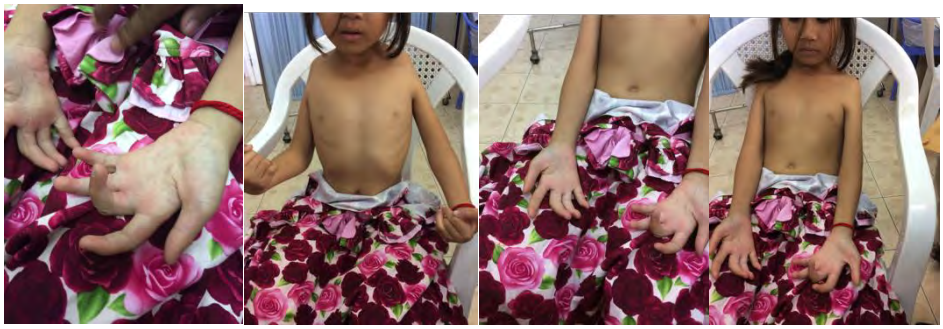
3 months duration. Atraumatic. Beginning ear pain, wax cleaned by ENT. Minimal pain. Oral AB. Sudden onset weakness. KB - MRI/ LP normal. 10 days, pt.

Went Vietnam, ?emg.
Improving- previously absent finger motion. Observe

#3. 4year female. Right fa synostosis. 80 degrees pronation. Right handed. Eats with spoon inleft hand. Cambodians eat with fork right and spoon left, from plate not bowl.

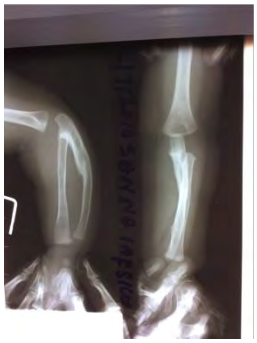


#4. 6 F RHD.?arthrogryposis upper extremities only. No passive ef at birth, splints from 3 years.
Sh fe 10
Ef passive - right 0-110 active 0-90 Left 0-100 passive 0-20 active Both triceps ok
Fa normal passive
Left r/m camptodactyly



Right mf
camptodactyly- tight fds.
Offered TATAR left mf - will consider over weekend.

#5. 1yr 3 months FOCD ulna



Left forearm curved. Noticed 6/12. No injury. Everything else normal. Left rcj clicky, but located. S85, pro 75.
Ud35/rd15

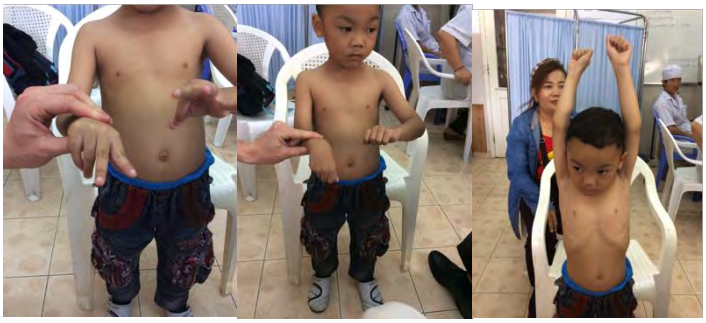
Focal osteocartilaginous dysplasia. Excision band Monday.

#6. 11year female. Gait problem few months Left hopping hard.
Gowers sign
Left hip irritable

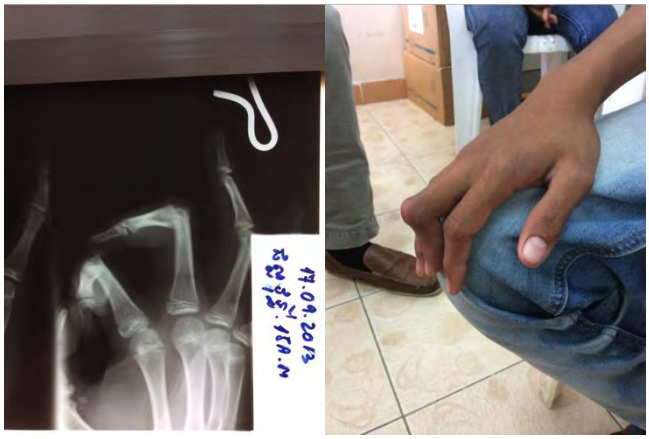
#7. 1/12 female Right nbpp
Ef early

#8. 4y M. Right flaccid paralysis. 4 months ago, "novogene" and antibiotics for febrile illness- unknown. No pain. Triceps 3 supinator0 Br0

Observe monthly charting Consider nerve transfer and tt in 6 months if no recovery. Muscle stim.



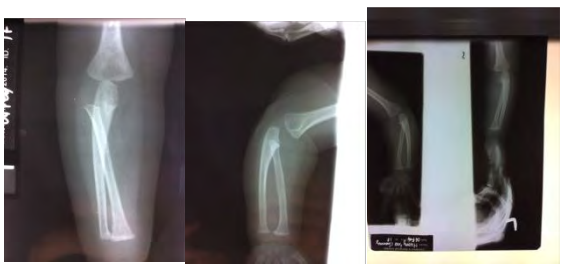
#9. 16M LHD, gd 4 student. Right mf traumatic boutonnière. PIP supple Lat bands subluxing and reducing. PL present.
For extensor reco.



#10. 25days male. 4.5kg, right nbpp.
Fe present No ef No we triceps ok partial c7 See 1 year, ncs for deficit

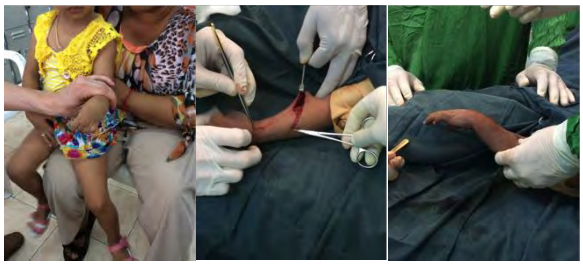
#11. 1yr 7 months

No trauma. Bilateral cubit us varus when crawling. R-heads subluxed. Full elbow/fa passive rom.
See 6/12 with lateral X-rays. Probable cong rhead dislocation.



#12. 4f left nbpp. Ef at ?.
Sh fe 60, ser 60 passive, o active head 3, ir L5, aer 30 No efc, ef strong triceps 4 No we, fe, epl. Ecu? Fcu yes, fcr maybe

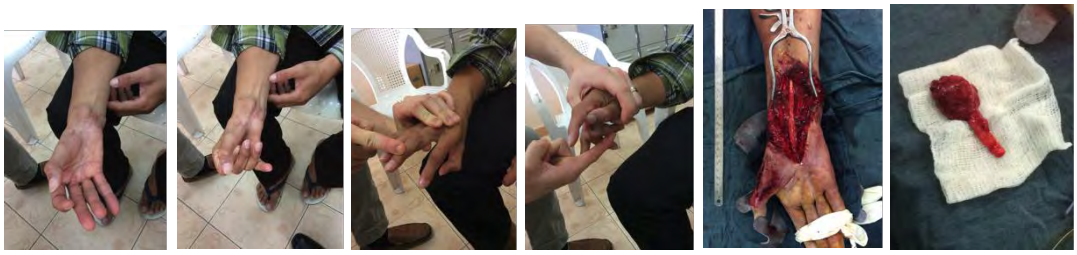
PL yes Fds r/m no, fdp ok PT yes. PT to ECRB PL to FE and EPL



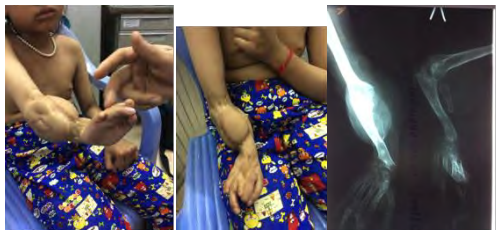
#13. Excision neuroma median nerve sural nerve grafts and EIP opposition transfer, Littler intrinsic releases middle,ring,little.

33m Sep 12 lac marble, Batambong All flexors , median nerve, ? Ulna nerve. Radial artery repair (twice) Kleinart rehab.
Poor sensation Median 2pd >15mm, min protective Ulna2pd >10mm, protective Opposition via tenodesis. No AbPBr 1st dio, abd dig min ok.

No FDS, Full finger flexion FDP, FPL. Tight intrinsics m/r/l Large median neuroma Tinel's.
Excision neuroma sural nerve grafts and EIP opposition, Littler releases.

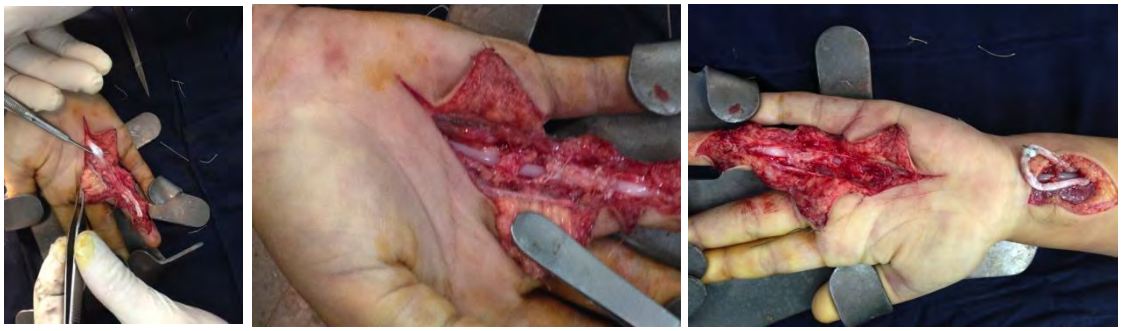


#14. 10f right upper extremity INJ July 2011 Crush in roller Minimal function. Contracted dorsal skin graft on bone. Minimal local soft tissue. Hand sensation ok, minimal digital motion. No intrinsic function. No FPL or ff.
Ulna growing? Consider wrist fusion and groin flap later, min functional improvement expected.



3+8mo Fall few weeks ago.
Type 2 sch #

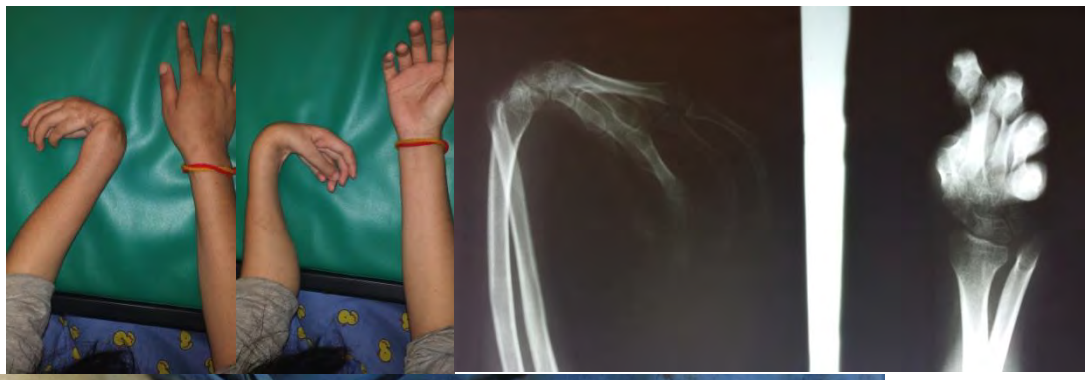
#15 7f rhd INJ 2011 right RF glass laceration OPN Swiss hospital suture.
No FDS/fdp Sensation? Passive full. PL present..
For 1st stage reco fdp and digital nerve repairs

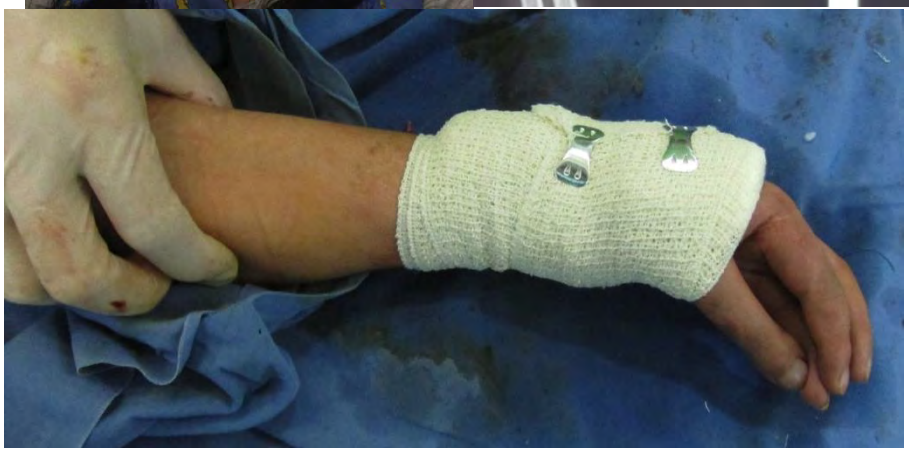


Children's Surgical Centre, Phnom Penh

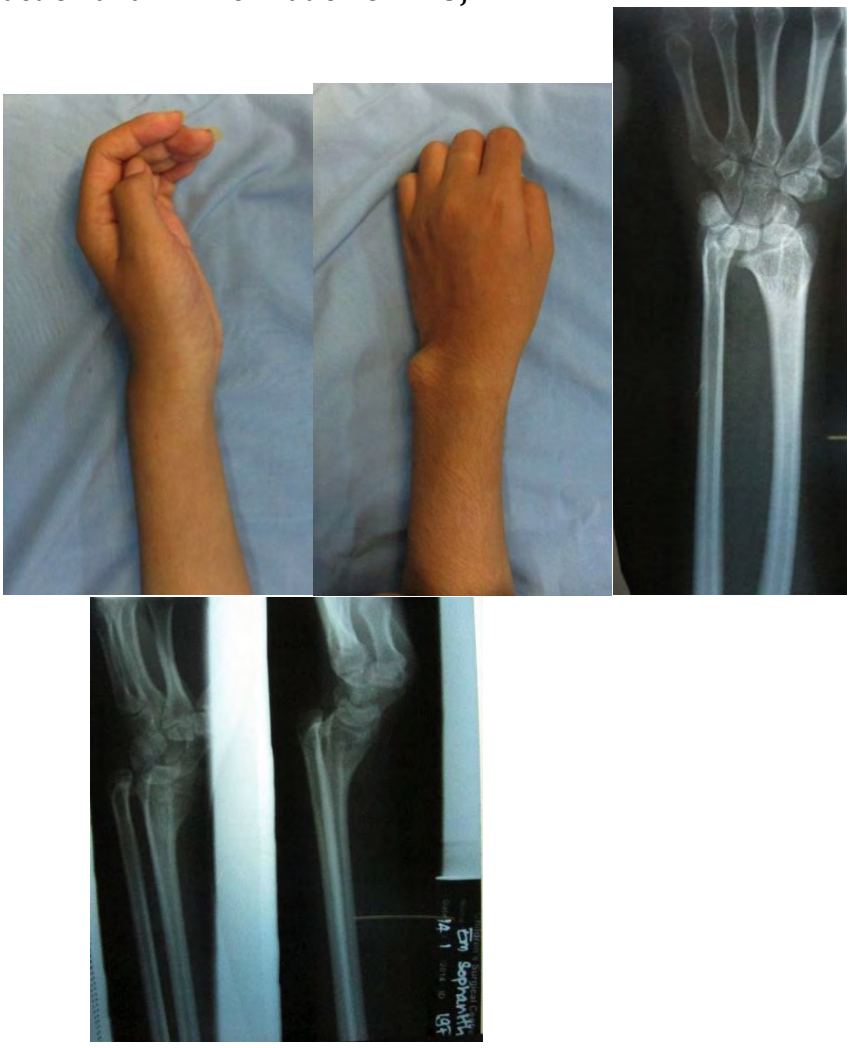
Monday August 11:

K S K, 18F old crushed injury left arm. Severe flexion contracture of the wrist. Possible from Volkmann ischemic contracture
Plan: PRC, explore extensor tendons and release volar scar. Total wrist fusion with dorsal plating
Imbrication of ECRB, ECRL, EPL

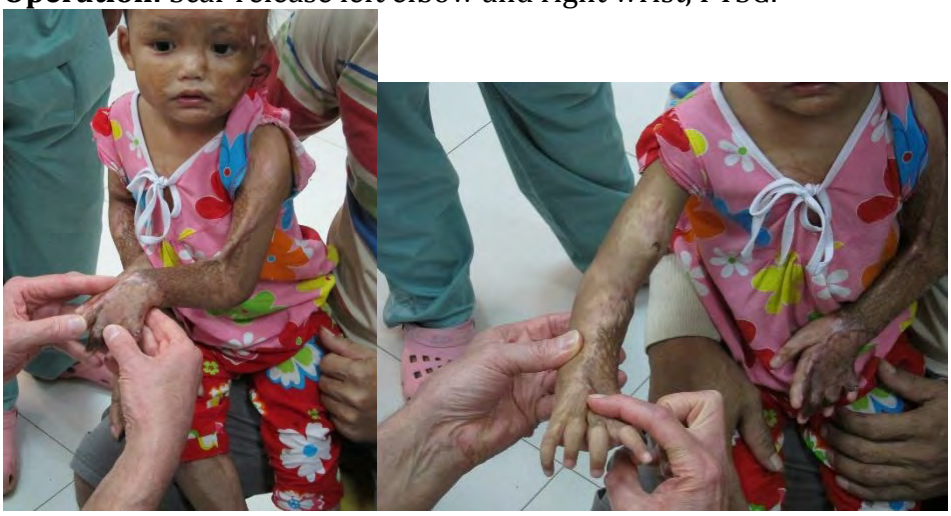




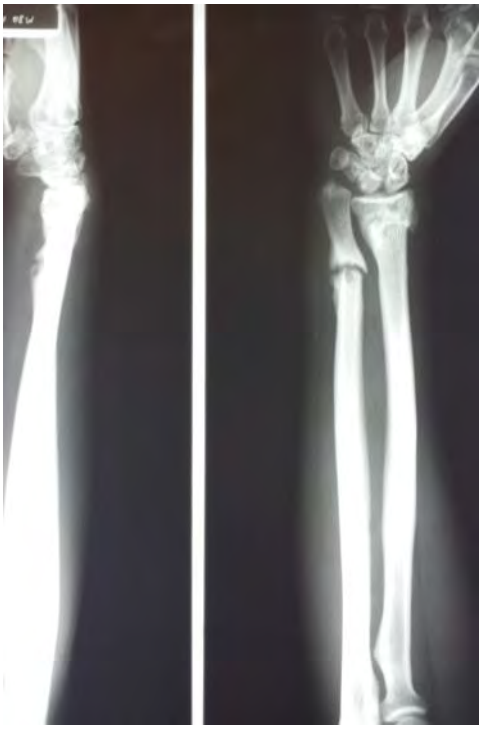
E S – 19F 2 years Malunion distal end left radius. Dislocated DRUJ, supination/pronation 5°/80°.
Operation: Corrective osteotomy with iliac crest bone graft.
Volar T-plate fixation.
Open reduction and K-wire fixation of DRUJ.



C C - 2yo F – Burn scar contracture left elbow and right wrist.
Operation: Scar release left elbow and right wrist, FTSG.

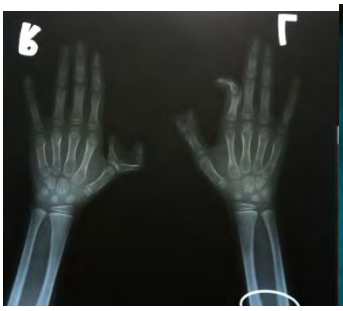
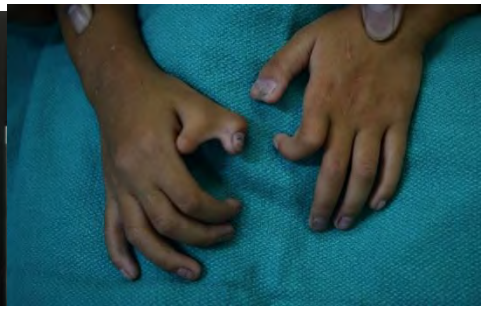
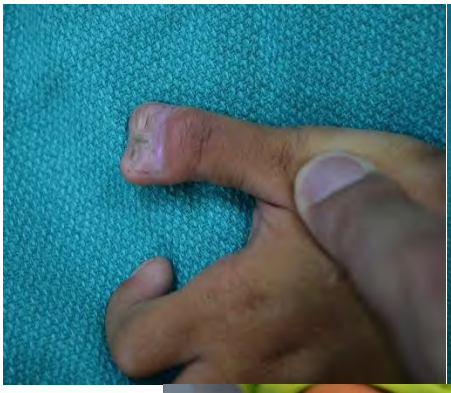
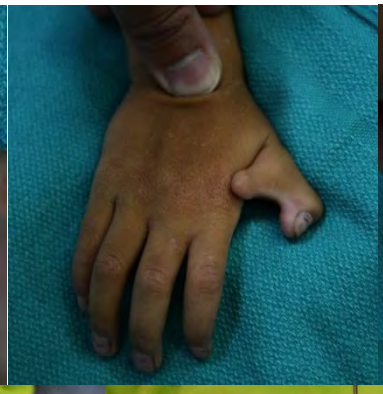
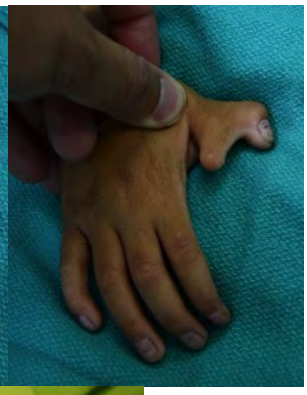
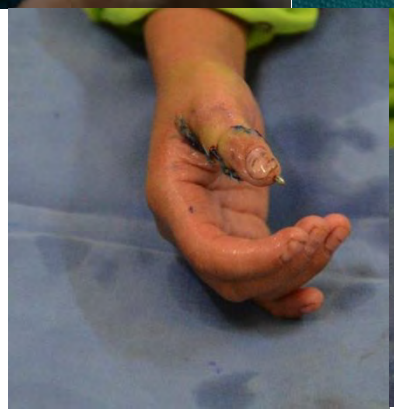
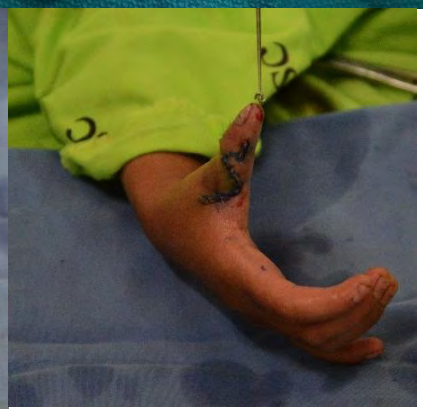


N D - 29 y.o. ORIF shortening nonunion distal ulna

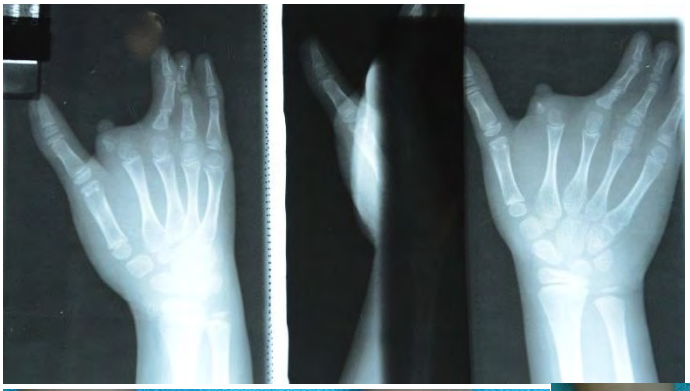


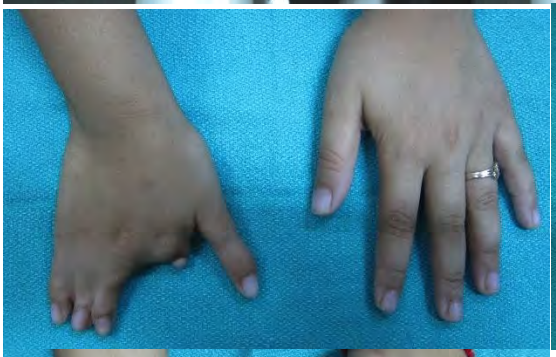
Tuesday August 12:

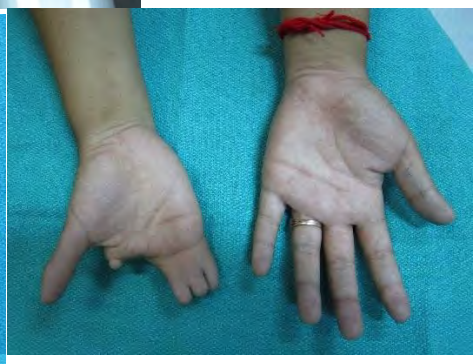
V S L – 5F with Bilateral Duplicated Thumb - left Bilaut-Cloquet and righ r/o ulnar accessory thumb fuse IPJ

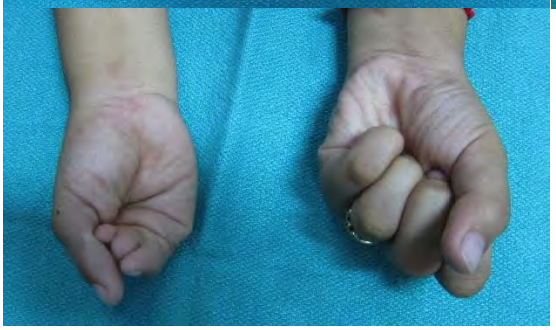








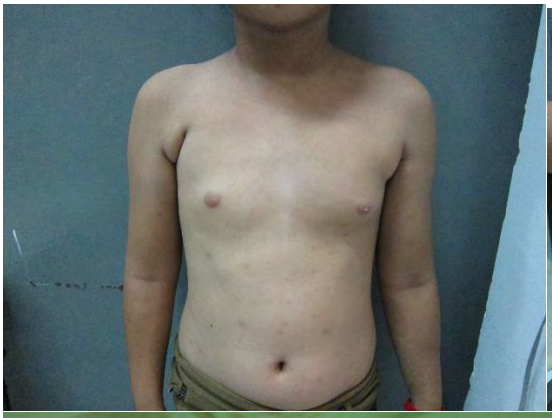
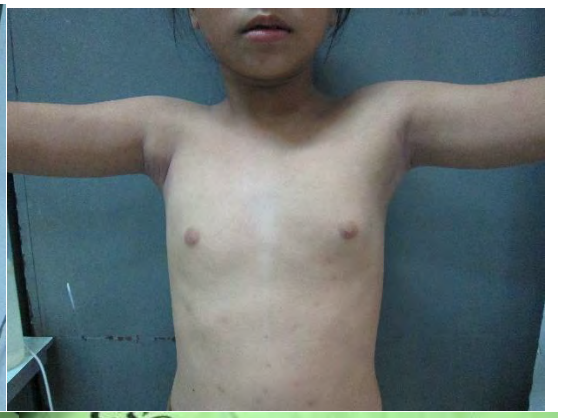
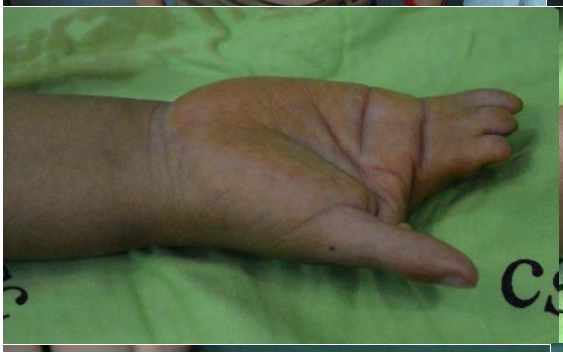
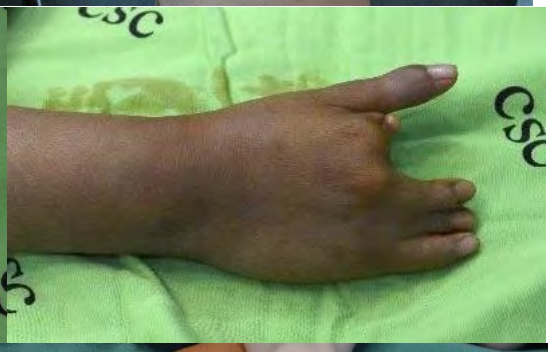
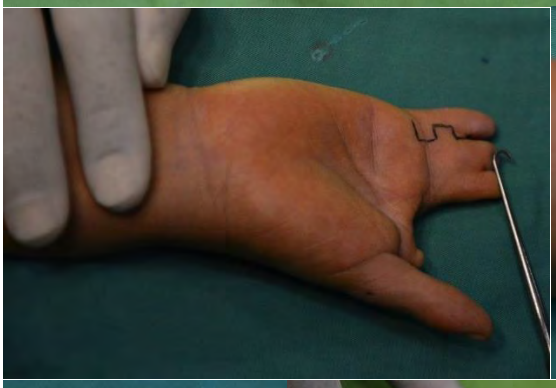
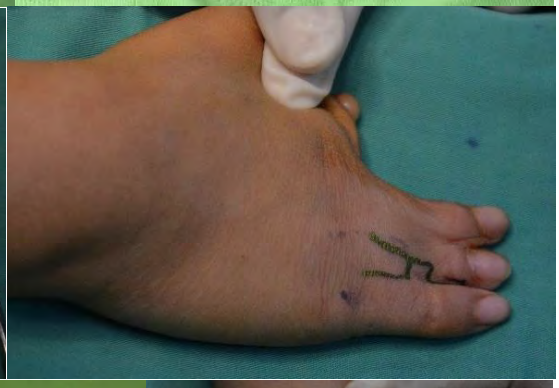
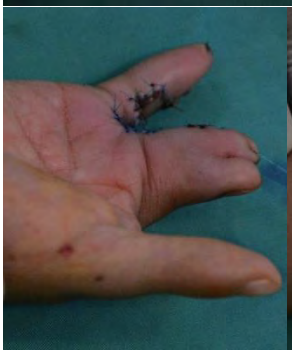
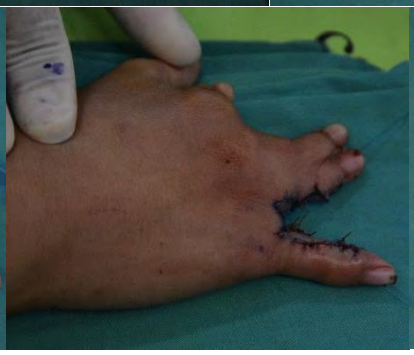
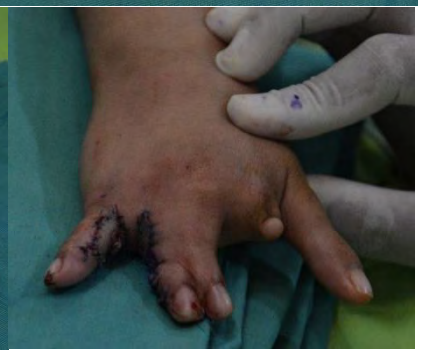
1. **V C N** – 9F Poland's syndrome





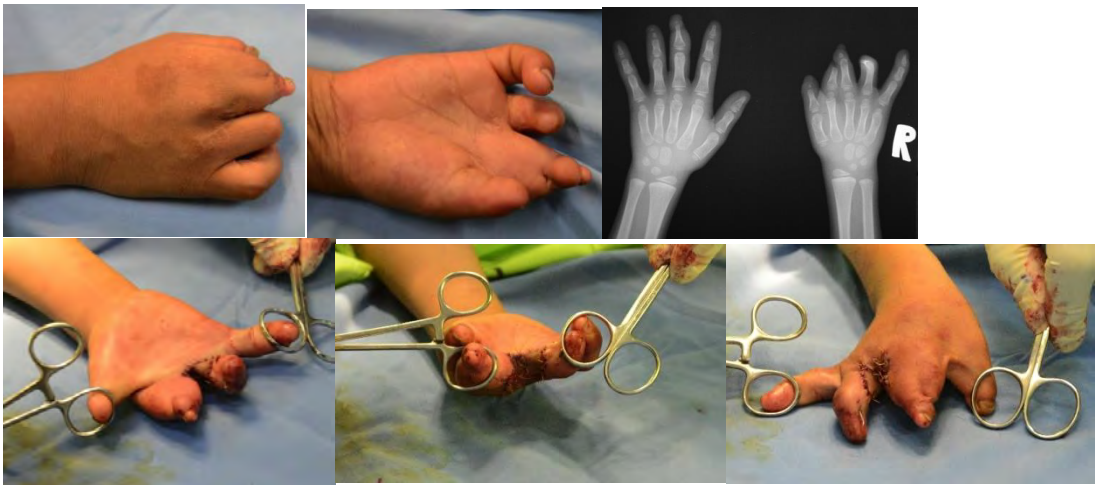




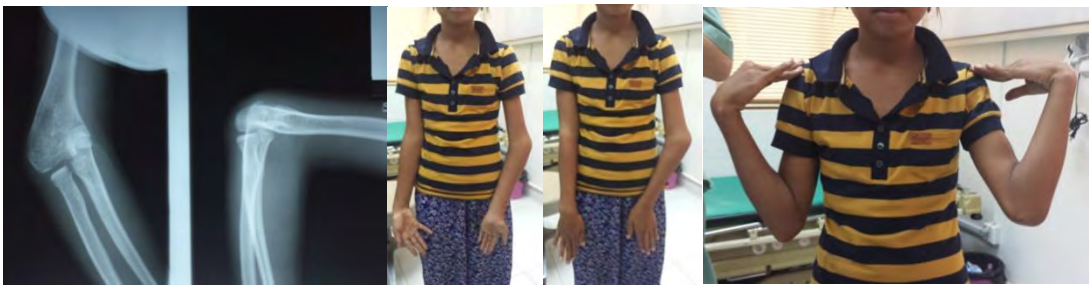










2. **C S** – 3M Z-plasty for Camptodactyly left middle finger

Y C V – 7M Revision syndactyly 3rd web space right hand



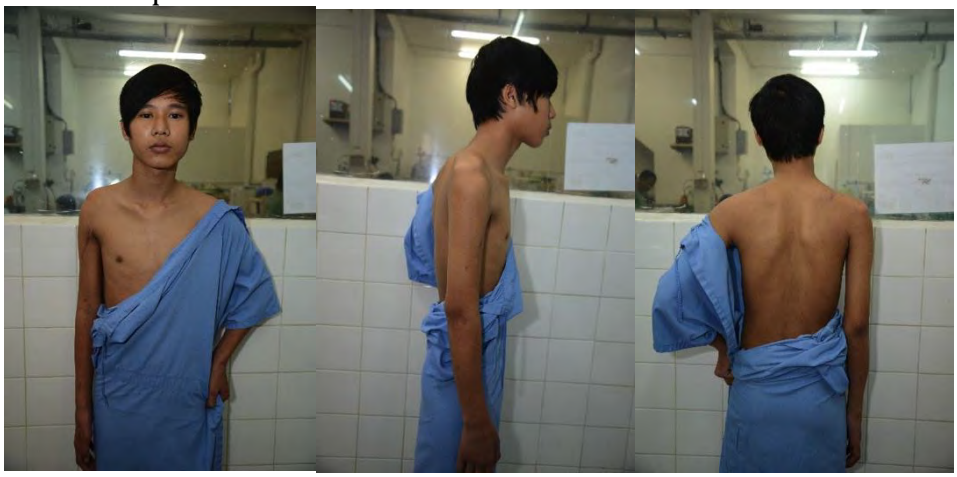
#6 **C S** - 14 y.o. left supracondylar ostotomy for cubitus valgus



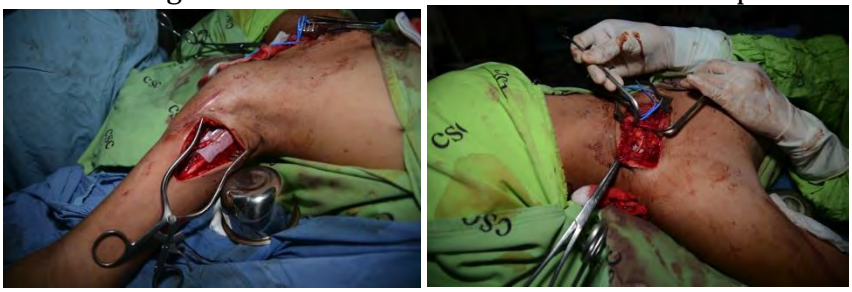
Wednesday August 13:

Some Sopheaktra – 19M MVA on 13 April 2014, loss of consciousness for 3 days, fractures of right humerus and right radius, s/p ORIF with plate right humerus. He has right total brachial plexus palsy. Tinel + at supraclavicular area, no Horner signs, no winging of scapular, Trapezius grade 5, radial pulse intact.
Operation: Explore brachial plexus, Spinal accessory nerve transfer to motor branch of biceps with sural nerve graft, phrenic nerve transfer to suprascapular nerve.
Finding: Extensive scar of the brachial plexus at suprascapular level.
All roots negative for nerve stimulation.

Scar around phrenic nerve, but still response to stimulation.
Good response of CN XI.



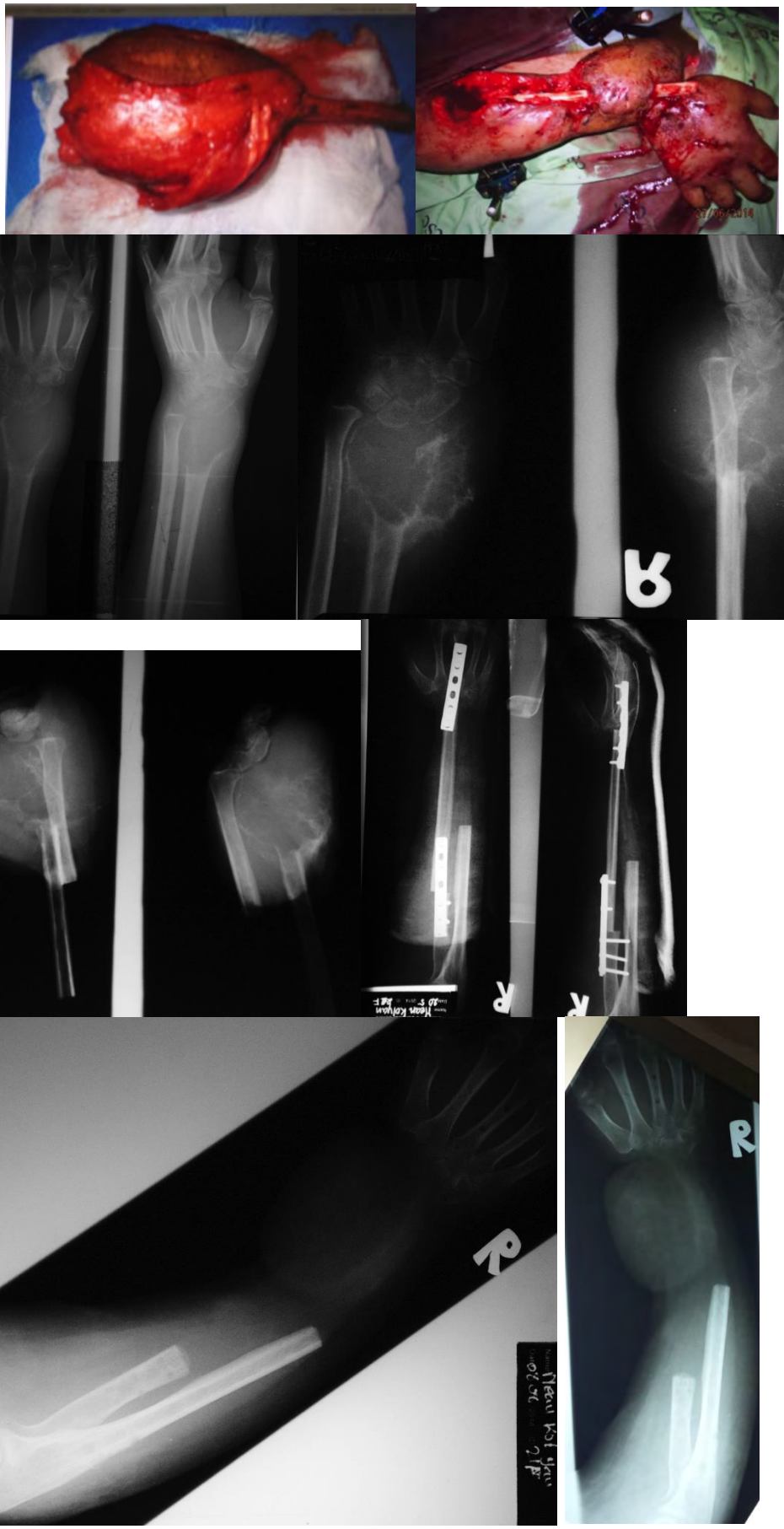
Sural nerve graft anastomosis to motor branch of biceps muscle (MCN)



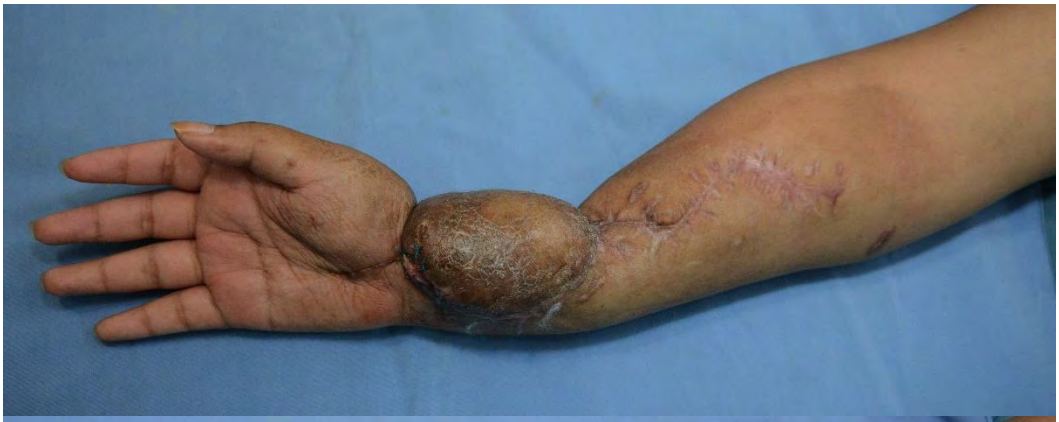
Spinal accessory nerve anastomosis to sural nerve graft

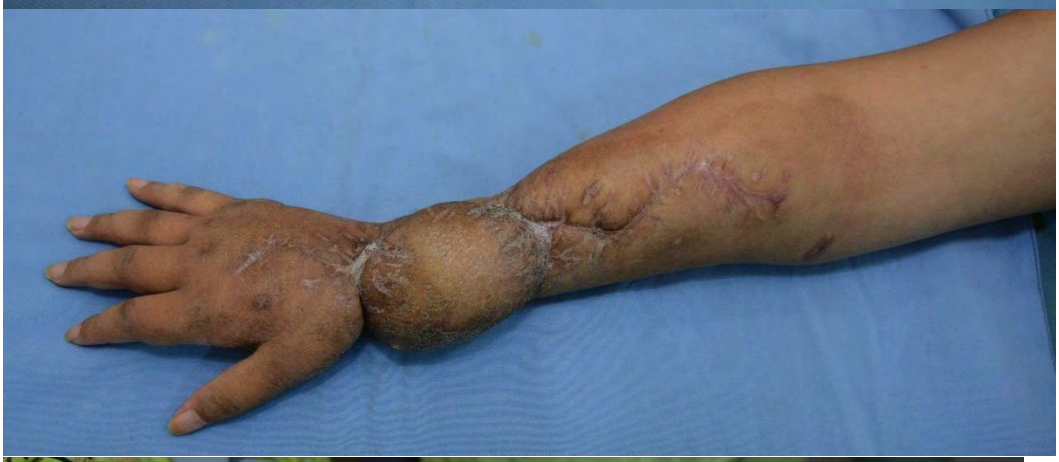
Phrenic nerve transfer to suprascapular nerve

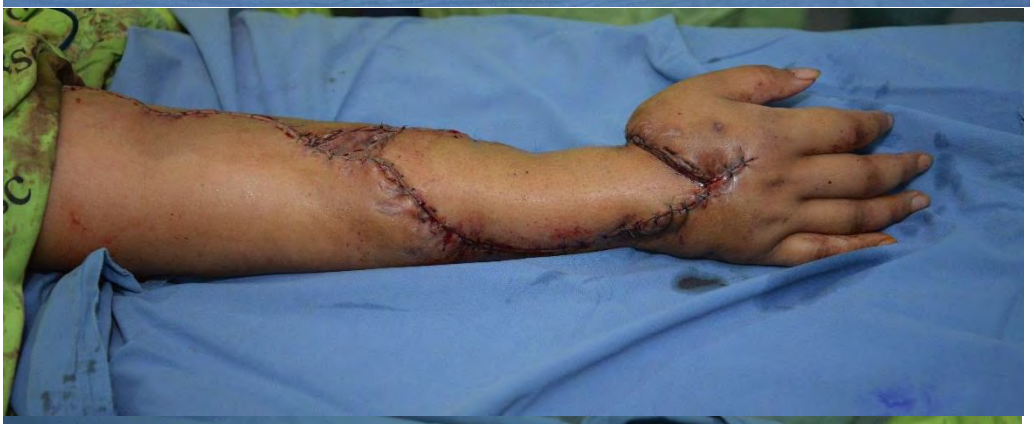
M K – 21F painful mass right wrist from January 2013.
Incisional biopsy 2 April 2013; pathological diagnosis: giant cell tumor.
Excision of tumor and free vascularized fibular 20 May 2014.
Necrosis and infection of fibular flap.
Debridement and groin flap on 27 may 2014, detached flap on 29 July 2014.
Final pathological report: 10 x 7.5 x 7 cm mass, Dx Giant cell tumor.

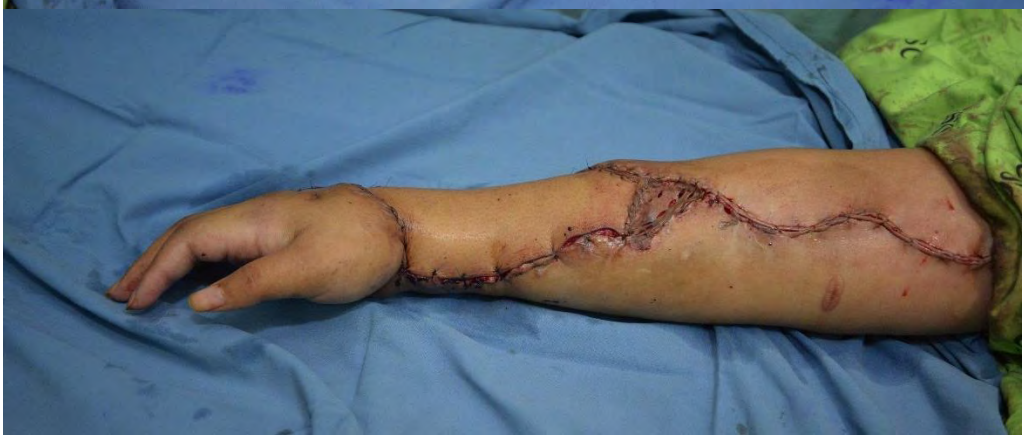


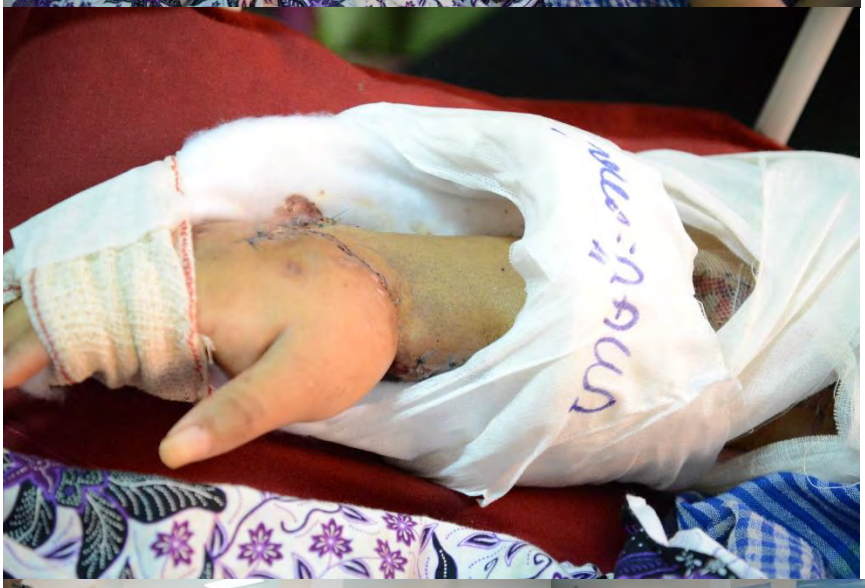
Operation: Osteocutaneous Free Vascularized Fibular Flap



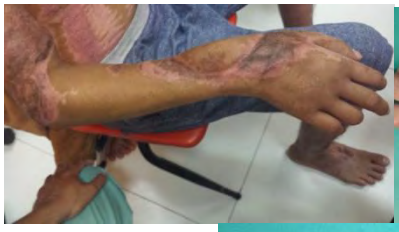
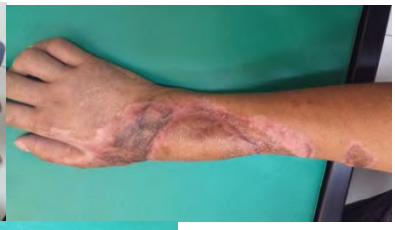
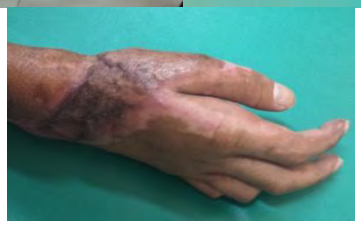




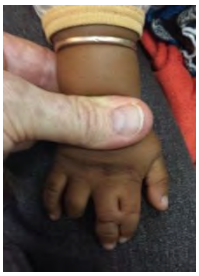




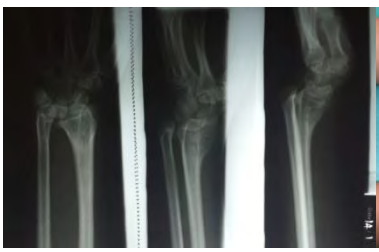
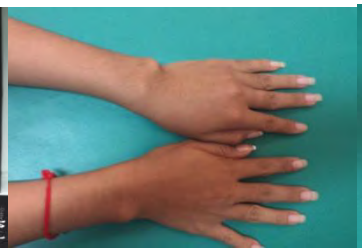
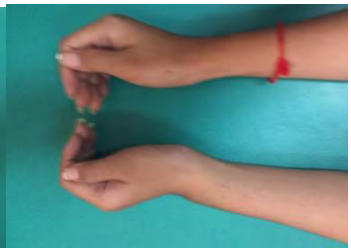
K F S - 21 y.o. burn loss left arm, absent median nerve and flexor tendons stiff MPJ ? Extensor tendons. Wrist fusion/ shortening MPJ release ?? Free tissue cover median nerve and tendons (TO DISCUSS)

P L - 6 mth Syndactyly release right Index, middle and right little toe

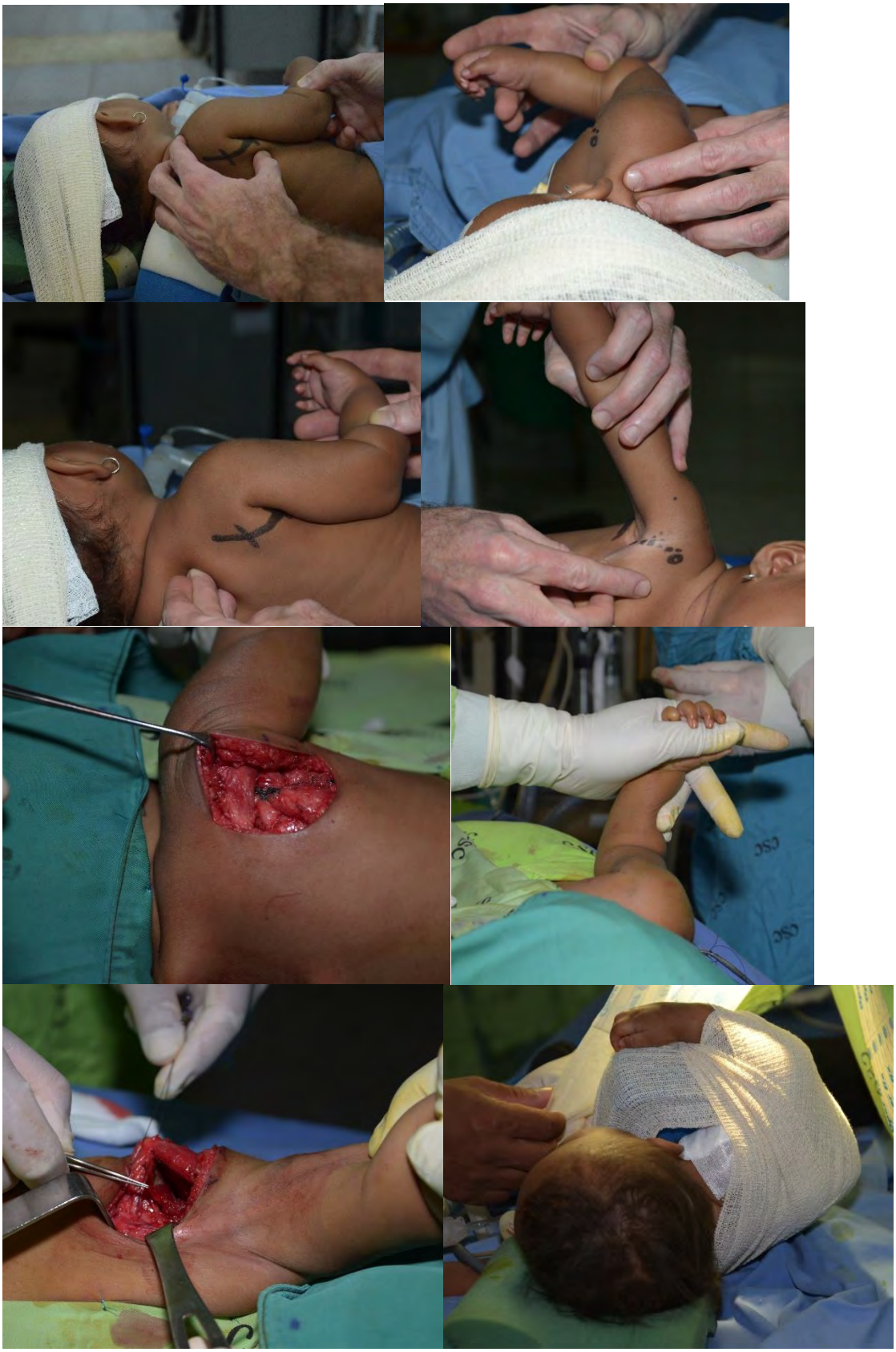


E S - 19 y.o. (L) radial malunion dislocated DRUJ, volar opening wedge osteotmy ? Reduce DRUJ/ shortening

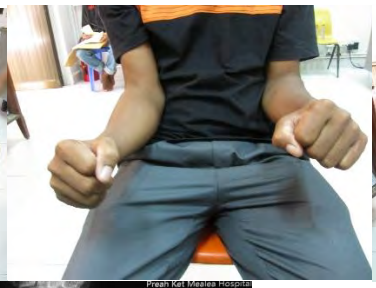




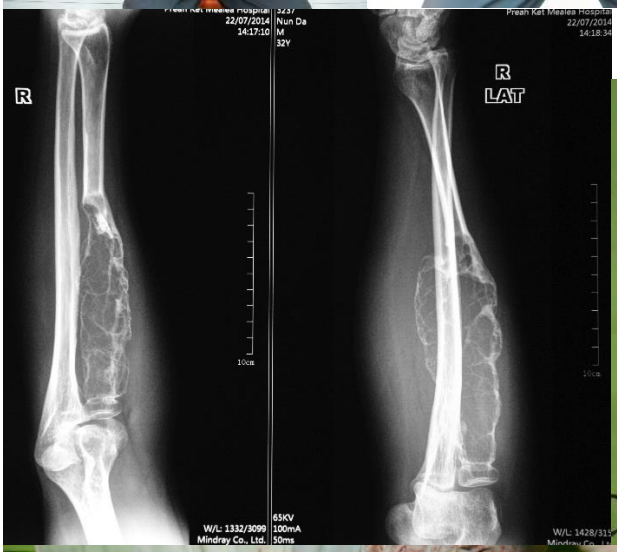
Thursday August 14:

L S N – 11month-old Female with upper arm obstetric brachial plexus palsy.
Operation: Subscapularis muscle release, Pectoralis Major release, and anterior coracohumeral ligament release.
LD transfer to Infraspinatus.
Exploration of motor branch of Biceps muscle, Median nerve,
and Ulnar nerve: all three nerves show + response to electrical stimulation.



N D – 32M Mass right proximal radius
Operation: Tumor Excision and one-bone forearm reconstruction


R
22/07/2014
14:17:10
Nun Da
M
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W/L: 1332/3099
Mindray Co., Ltd.
65KV
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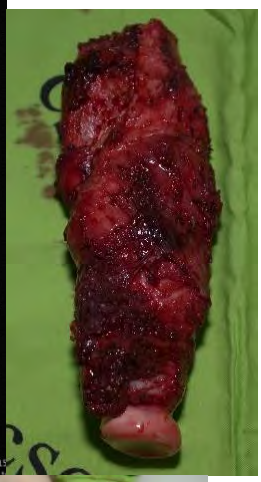
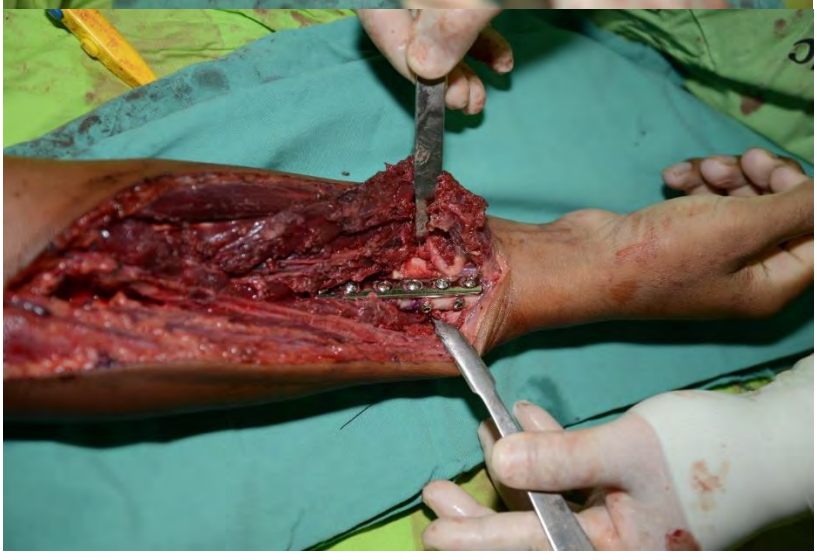
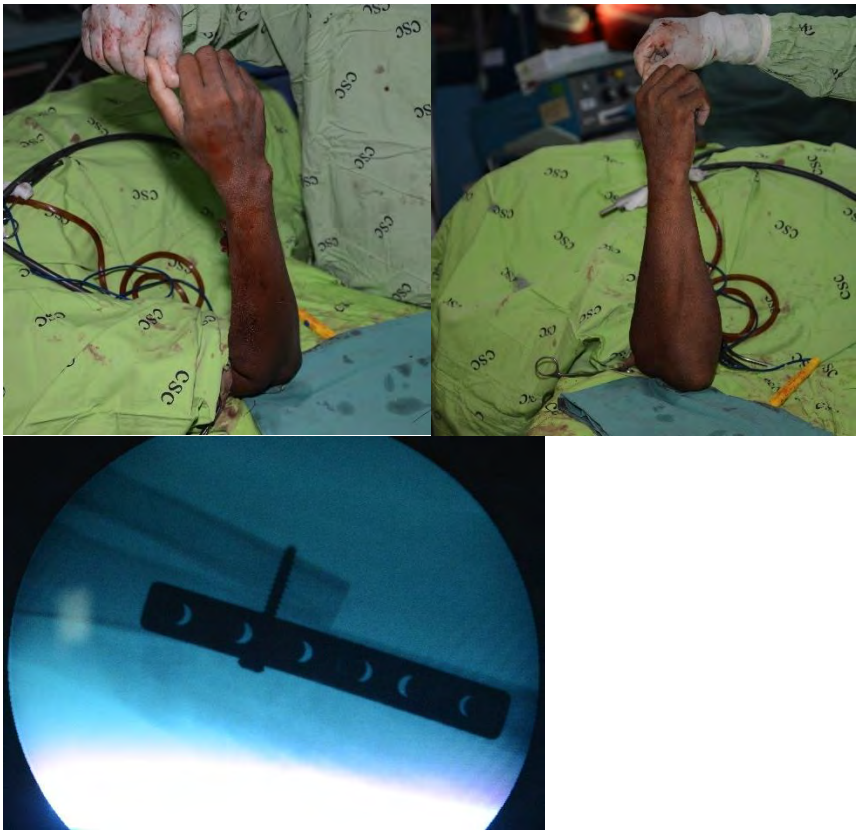
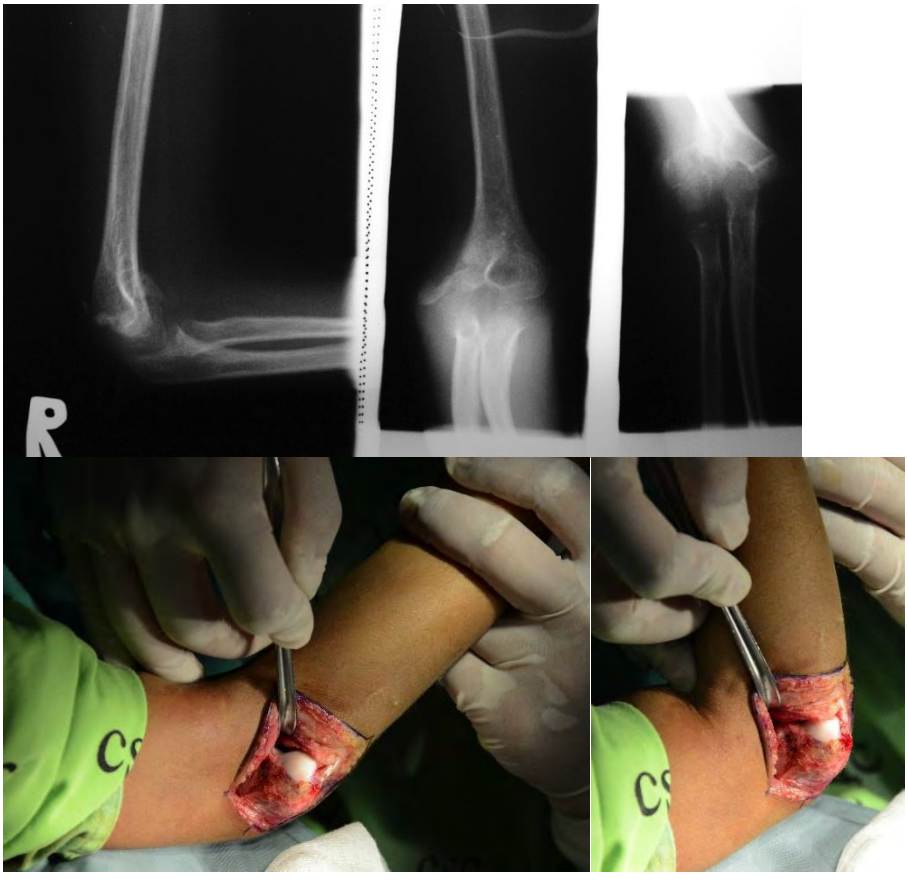
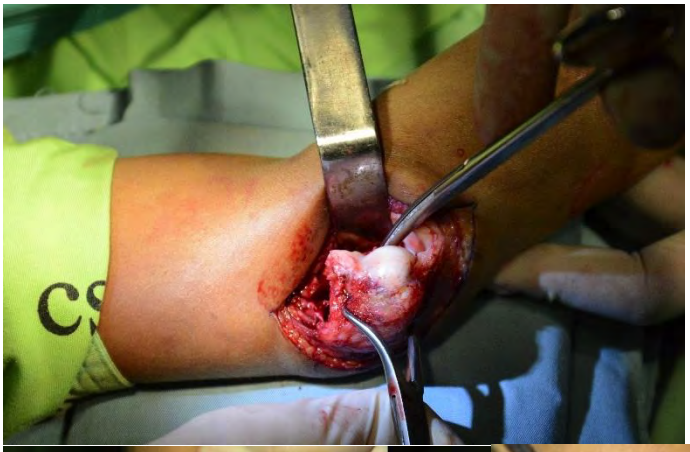


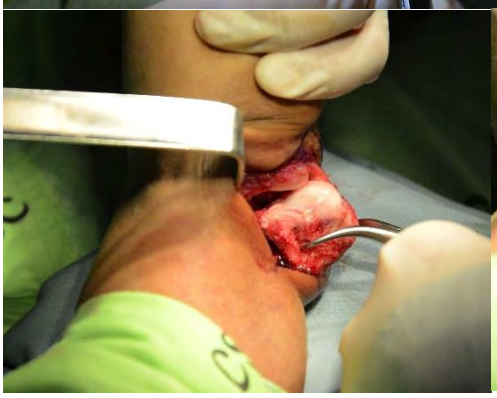


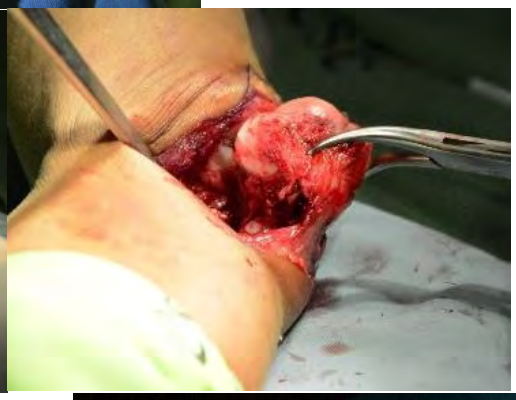


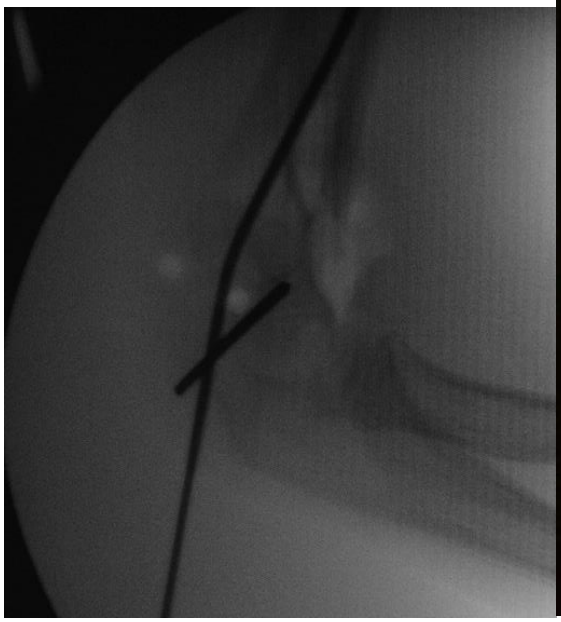
O T – 11F Nonunion lateral condyle humerus
Operation: ORIF with K-wire



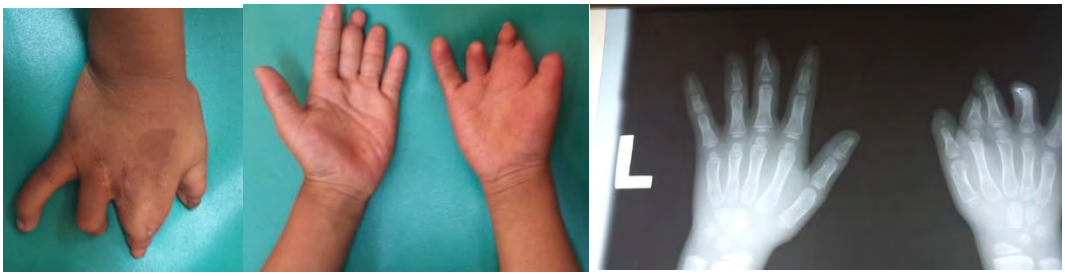






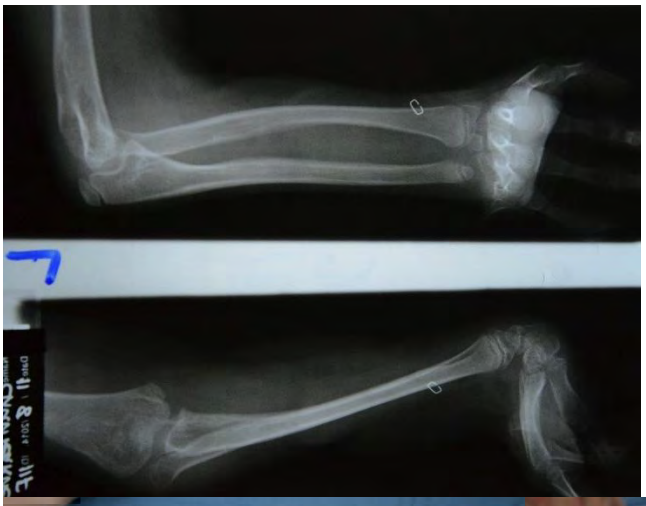


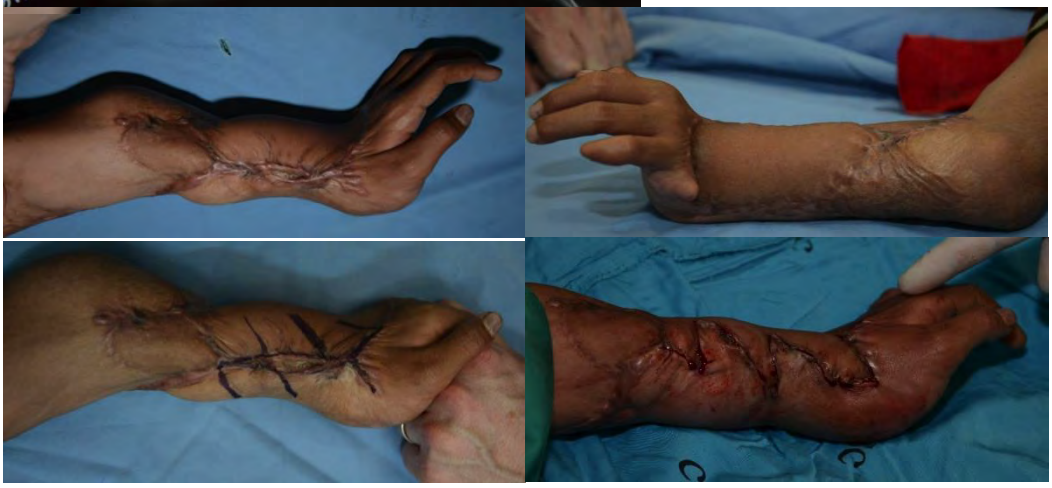
V S R - acrosyndactyly release left index and ring excise middle finger and right 2nd web deepening.

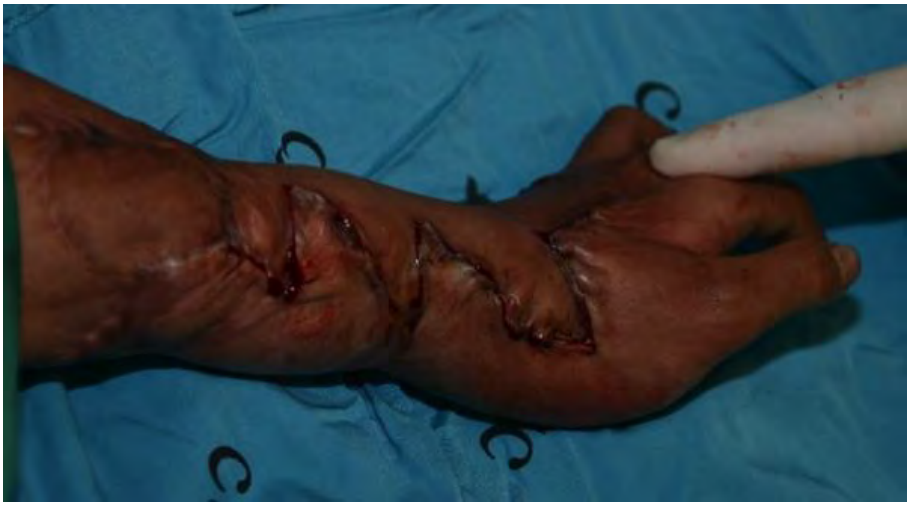


B V - 13 y.o. release right LF PIPJ Z plasty

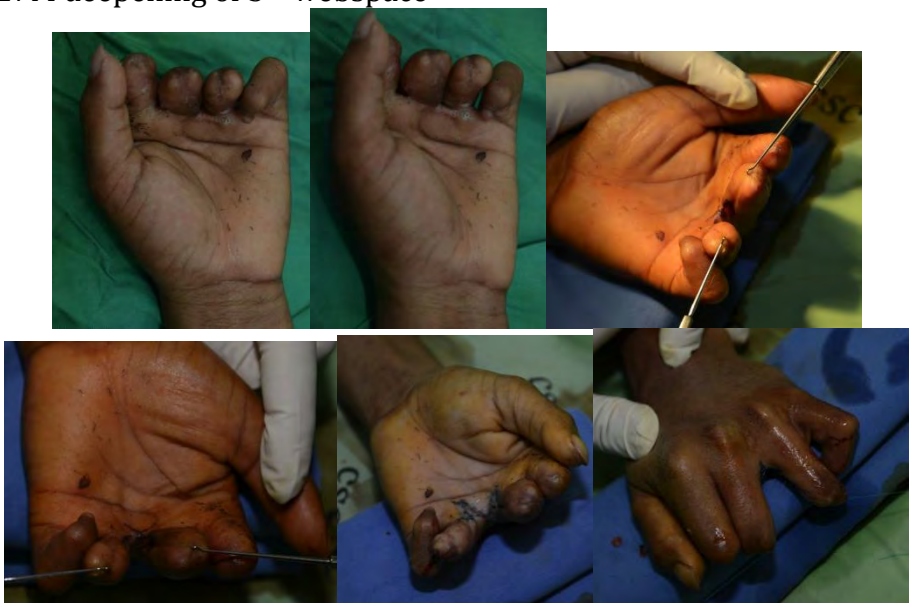
C L – 11F Burn scar contracture
Operation: Multiple Z-plasty release left wrist







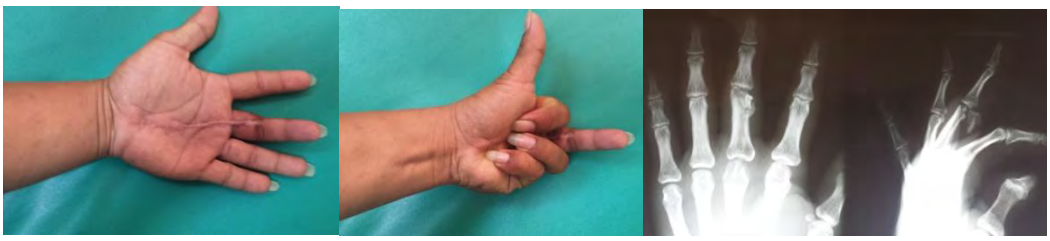
S S R – 27M deepening of 3rd webspace



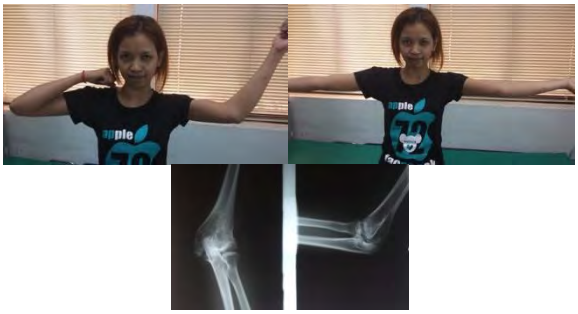
Friday August 15:

P B - 18 y.o. release syndactyly (L) foot

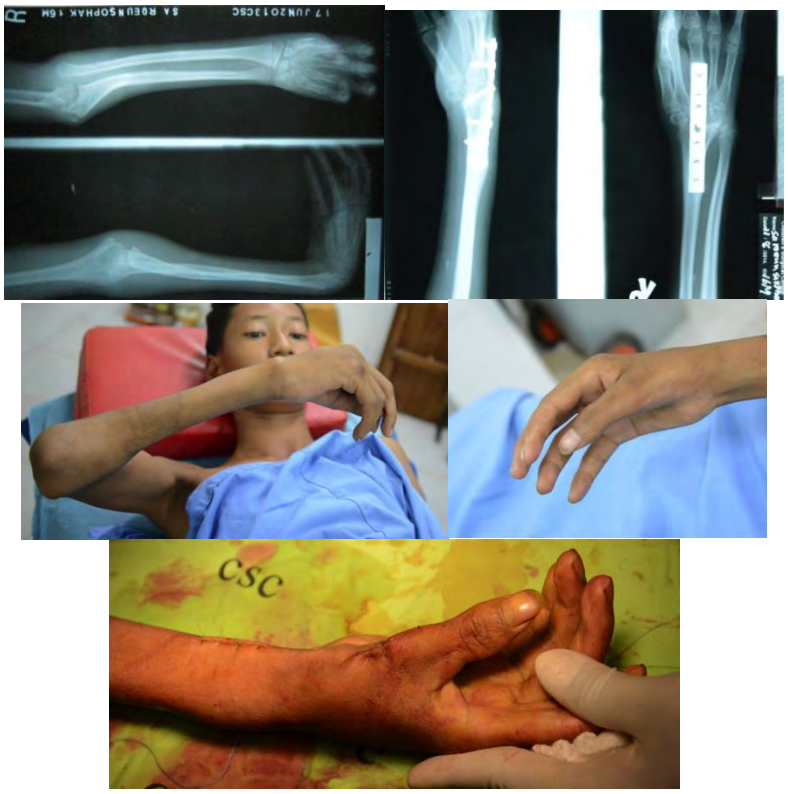
S M C - right Middle finger flexor tendon and nerve PIPJ fracture? Tendon rod (NOT NERVE GRAFT)



C S - 27 yo female. Left elbow injury 8 years ago.
Range 0-65 Degrees.



S R S – 16M Volkmann Ischemic contracture s/p wrist fusion last year. Weakness of finger extension ring and small fingers. Weakness of thumb palmar abduction.
Operation: Removal of Hardware
Extensor tenolysis
Palmaris longus tendon transfer to EPL
Side-to-side tendon transfer of index & middle fingers EDC to ring & small fingers EDC

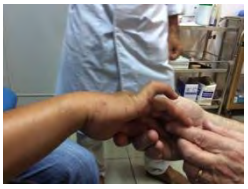


Ward round with CSC physicians and nurses for post-op patient evaluation and planning.

Military Hospital (Pheah Keto Mealea Hospital)

52 F - Small ganglion and DeQurvveins
Radial styloid lump.
Full movement.
Pain on ulna deviation Finklesteins positive.
Dirkens positive, APB 5/5
Impression: Dequervains synovitis and synovial cyst. Plus mild CTS
Plan: OR for De quervains release and excision cyst.

C C - 34 M RHD
Doctor in ICU
Right little finger previous FDS/FDP repair
10 years ago.
Delay in operative Rx 5 Months
MCP 40-110
PIP FFD 50,
DIP FFD 25
Nil Active initiation of MCP joint movement
Good grip strength
MCP catching over joint while doing passive ROM
Adductor digiti minimi 5/5
RX options 2 stage recon - low yield.

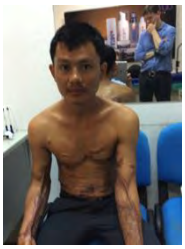
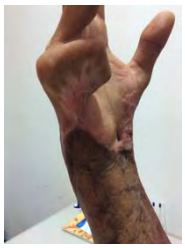


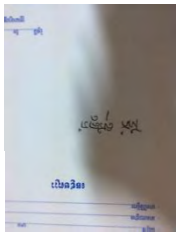
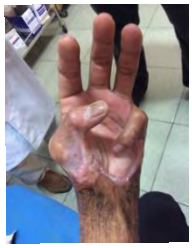
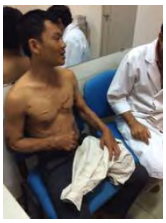
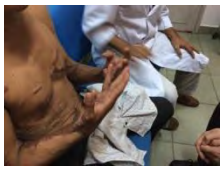
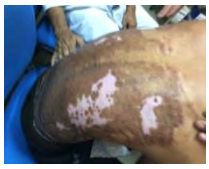
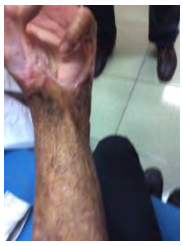
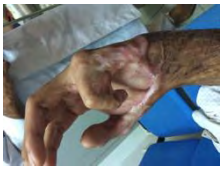
Note - needs hand therapy next week.

28yo male office worker
Burn from gasoline 20 months ago
Car explosion
Extensive burns
Right side:
Right elbow 45 flex contracture supination full pro full writ flex 60
Elbow extended wrist ext -30
Full radial ulnar deviation
Writing good. Computer poor with left hand
Opposition to LF right LF can be flexed into palm.
MAIN ISSUES: right side thick scar at wrist and LF full flexion contracture
Macerated skin with scar photo

Left side:
Elbow triceps5
-10 extension with wrist flexed. -45 with wrist neutral
Rad ulnar dev normal
Volar scar. Contracture thumb.
Little finger scar flexion contracture photo
FPL OK IP 0-90 MCP 5-80
LF Flexor intact DIP 0-90 DIP 45-100 MCP 90

Recommend left elbow release with Z left thumb and little release and FTSG FROM RiGht GROIN.

Thursday August 14

Review of Dr. Chum Chanvecheka, ICU doctor. Age 34.
Needs to salute.
Right little finger. PIP FFD. Flexor laceration age 20. 45 deg FFD. Flexor bowstringing. Likely poor repair.
Needs HT then scar release. Z Plasty. ? Pulley recon. PIP release. Has PL. 2015

Benjamin East - OR for left DeQuervains release.

Friday August 15

Benjamin East and David Stewart OR for release and graft multiple burn scars.

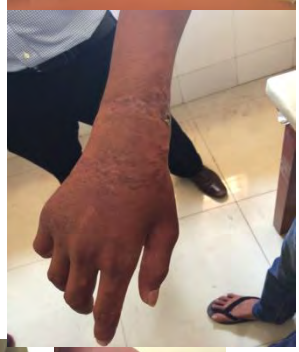




Friday August 8.

- Patient evaluation with Dr. Ry Syna
- Surgery morning conference and Hand Therapy interaction with Physio Department - Wednesday.
- Surgery with Dr. Rey Syna - Friday.

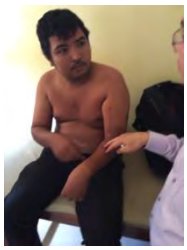
K L – 24F 4 months after accident. Right C5, C6 Brachial plexus injury with open injury of elbow & forearm. History of brachial artery injury and torn of distal biceps tendon. Both brachial artery and biceps tendon have been repaired at the time of injury. Subsequently, partial thickness skin graft was done to cover the elbow and forearm wound. She also has stiffness of all MCP joints, which substantially limit her hand function.

Plan Explore brachial plexus and nerve transfers

- CN XI (or Phrenic) to Suprascapular nerve
- Nerve to Triceps transfer to Axillary nerve
- Oberlin double nerve transfers for Biceps and Brachialis
- MCP Capsulectomy

T D – 26 M



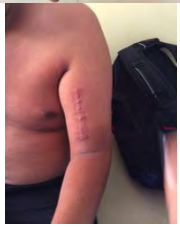
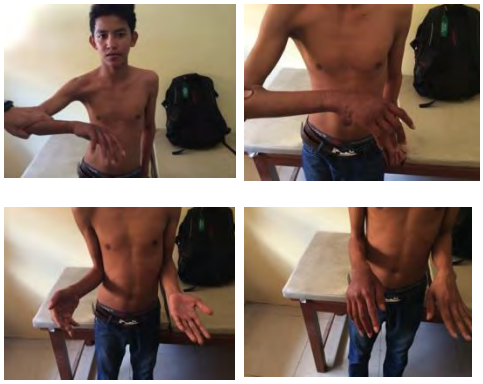


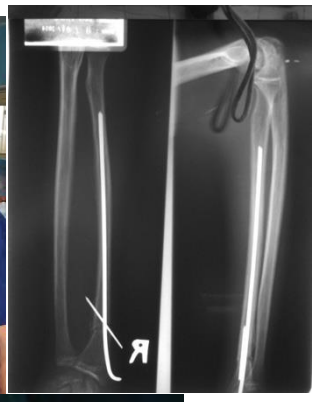
Plate humerus march 2014
Radial nerve out 5 months
Tinels + at trauma site posteriorly
? Radial out prior to plate
Note posterior open wound scars.
Very anterior plate approach.
Recommendation: Tendon transfers

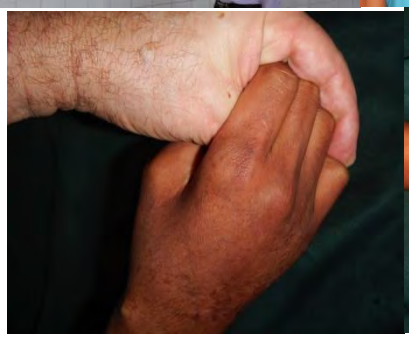
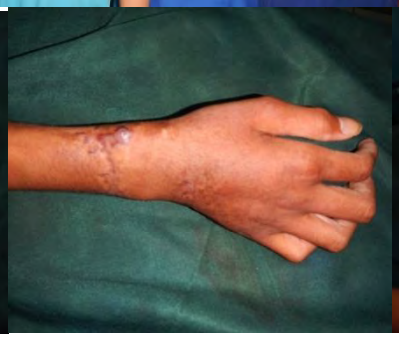
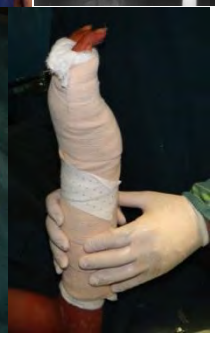
V M
20 yo male
Wrist open injury.
Double dorsal wrist lacerations. Skin closed. ? no repair.
Needs X-ray and review. Fracture uniting with longitudinal rush nail and oblique K wire in place. K wire about to protrude from the skin. Requires exploration with secondary tendon repairs/graft/transfer +/- MCP releases.



Friday August 15.

V M - OR for exploration dorsal wrist wounds x 2. Secondary tendon repair and graft.

Hand Therapy

Anne Wajon and Cathy Merry 10-15 August 2014

Dr. Anne Wajon and Cathy Merry, both very experienced Hand Therapists lent their expertise to the work of the team again in 2014. Anne had been part of the team in 2013 and Cathy was returning after her first working visit in 1999.

They were able reestablish their professional contacts at a number of the Local Partner hospitals, undertaking patient assessment and treatments, face to face tutorials, group teaching sessions and contributing to the teaching program at the UHS.

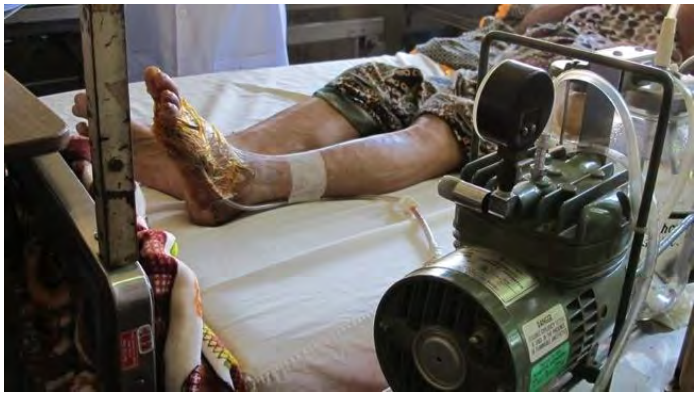
Valuable links were forged, refreshed and strengthened for future collaboration and patient care with their expertise again reinforcing the importance of integrated team teaching and treatment in Upper Limb service programs.

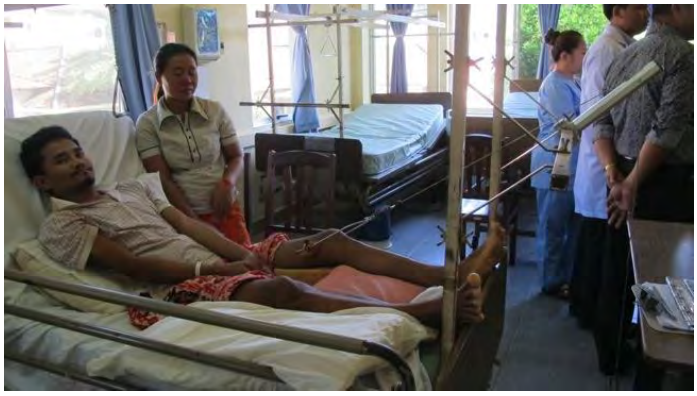
A summary of their activity:

Monday August 11:

Morning visit to **Sihanouk Hospital Centre of Hope (SHCH)** with Prof Gumley for ward round in surgical ward.

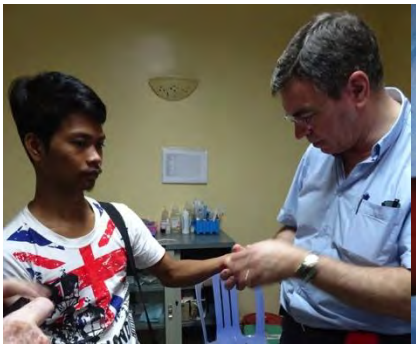
Patients for breast mastectomy x 2, diabetic with little toe amputation and VAC dressing, man with femoral and pelvic fracture in traction.
Patient in isolation: EBSL with foot infection and amputation

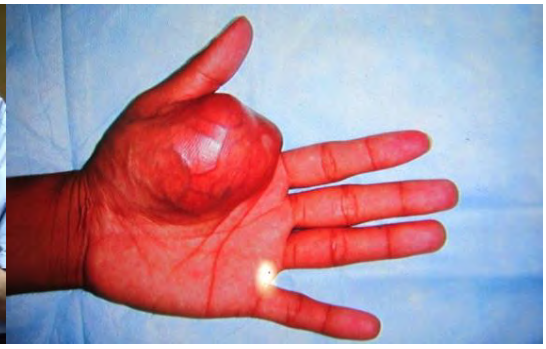




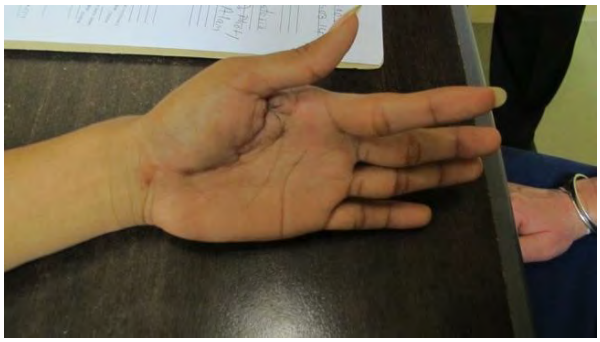
SHCH **Community Medical Centre** (CMC) to meet with Dr Phot and Mr Rossy (physiotherapist). 3 patients reviewed:

1. 22 year old Patient w left web space aggressive fibromatosis had repeat excision on 22/3/14. Now presents with tight 1st web space and index finger intrinsic tightness.



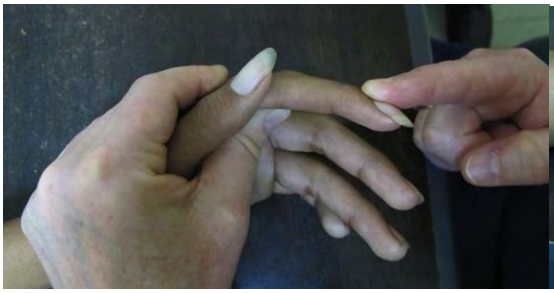
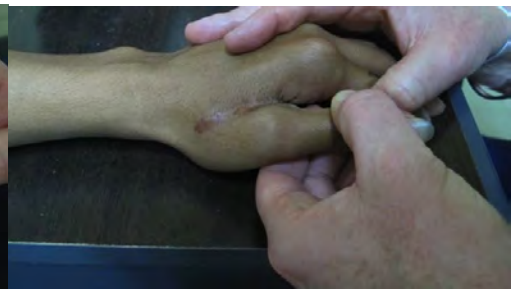


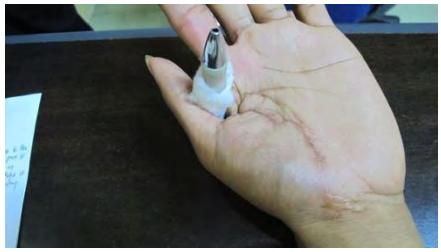
MP jt extension 35/. Unable to flex thumb past index finger because he could not get index finger out of the way. Good gross finger flexion, thumb flexion but no pal abd or opposition. Scar thick and mildly sensitive



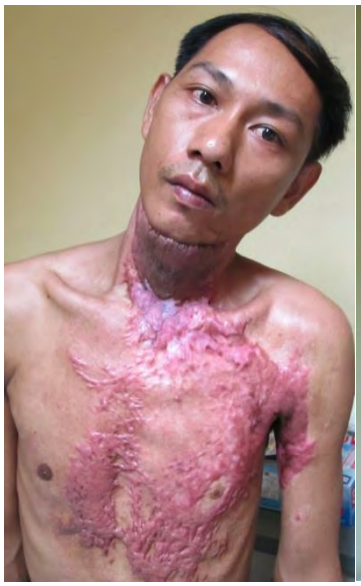
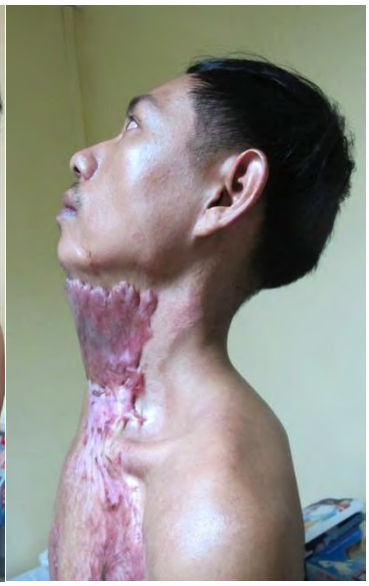
<u>Treatment</u>: instructed to perform intrinsic stretches with pen blocking MP jt in extension over edge of table, then to actively flex IP jts

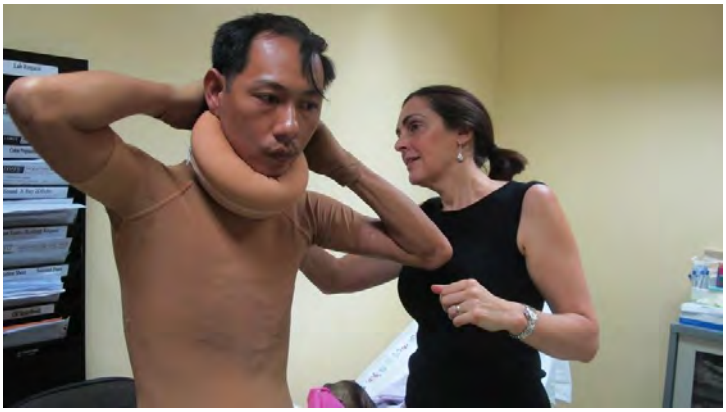
Scar massage, padded pencil in 1st web space for 30 min, 3 times per day



2. 34 year old mechanic with gasoline burns 6/12 ago, now patent presents with anterior neck and thorax burns extending into left axilla. Patient has been using firm foam collar to apply pressure on any neck to flatten scar and address neck flexion deformity. Now concerned with flattening scar to improved appearance and neck mobility
Treatment: discuss importance of massage, continued pressure, neck stretches and postural correction, considered alternative neck support but not seen to be beneficial.
Plan: to provide silicone to flatten scar which would need to be worn for up to 8 hours per night in conjunction with neck collar and lycra corset pressure garment

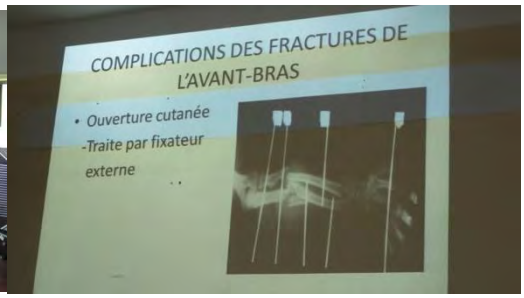


3. 67 year old women with left sided shoulder pain, reporting limited motion in all directions, restricting ADL, including doing up her bra and reaching overhead.
Previous CSI provided minimal improvement in symptoms, only relief with panadeine.
Diagnosis: adhesive capsulitis left shoulder
Treatment: postural correction to address thoracic spine and scapulothoracic joint alignment, adduction exercises to reduce tendency for glenohumeral head to impinge on acromion with motion
Advice to Mr Russy regarding ongoing management

Lunch at SHCH, then taxi to **National Paediatric Hospital** (NPH) for pre-op assessment of patient requiring surgery for median nerve neuroma, involving median nerve graft and opposition transfer and intrinsic releases.

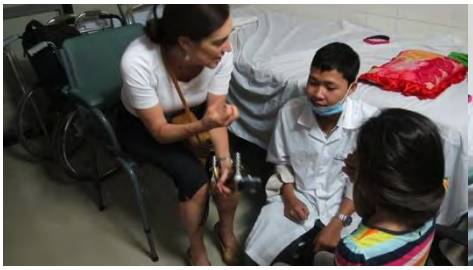
WEDNESDAY August 13:

Morning visit to **Preah Kossomack Hospital** to attend morning surgical audit with Dr Tim Keenan and local staff. Junior staff presented short talk on Monteggia and Galleazzi fractures, then taken on tour of hospital.



Visit with Physiotherapy department, and joined Seiha Suth, PT (pt_seiha@Yahoo.com) as he treated a number of patients:

1. 8 year old girl 2 months post reduction of distal humeral fracture which had been previously treated by traditional healer, resulting in 90degree flexion contracture. Discuss treatment approaches with Mr Suth, including stretches, strengthening, massage, heat, and assessment of grip strength with Jamar dynamometer



2. Review of patient with left wrist pain following ulnar head excision. This patient was wearing a canvas wrist support which had been inappropriately trimmed on the ulnar side of the hand, reducing its effective support. Discussion with therapist regarding modification of splint.

We were impressed by the collegiality of staff and general treatment approaches in the *Kinesiotherapie* department, however noted that they did not make any written clinical notes.

Narin drove us to **Childrens Surgical Centre** (Kien Khleang) to meet with Toun Phea, Head of Physiotherapy (phea@csc.org). We worked with him and his colleagues to assess and treat 7 patients, both acute post-operative cases and patients of his who had been attending for some time. We were particularly impressed by the medical record keeping in the department, with all patient files having patient photos, operation reports, Xrays, and summary of treatments provided to date.

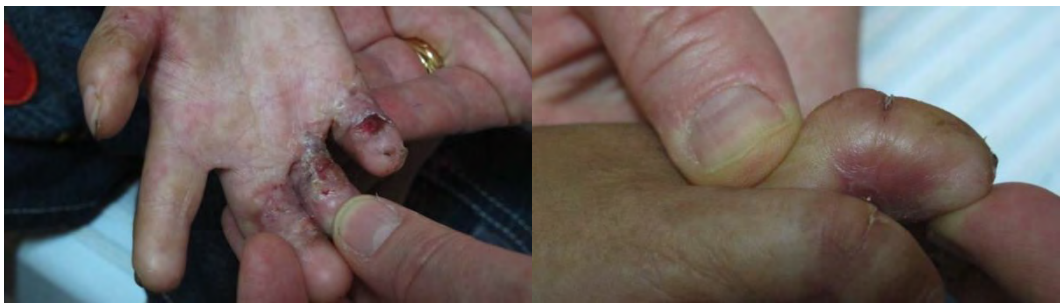
1. median and ulnar nerve laerations with resultant claw deformity and long flexor tightness subsequent to laceration on mirror. Median nerve sensation returning with APB grade 3, but no return of ulnar nerve sensation or intrinsic strength.

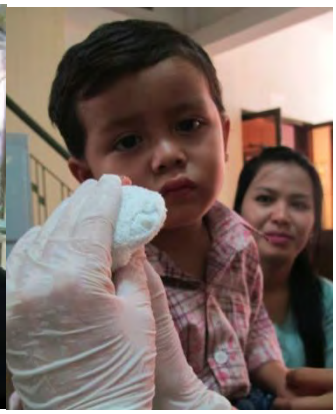
Treatment: a. volar plaster slab to stretch tight flexors
b. Fiberglass spaghetti splint to hold MPs flexed and enhance active PIP extension to prevent PIP flexion contracture

2. 4 year old boy with burns to right hand fingers and amputation of little finger DIP joint. Presents with fixed flexion contractures of PIP joints of ring (60/)and little (45/) fingers. Previous treatment to middle finger had achieved improvement to PIP joint extension.

Treatment: POP ulnar gutter cast fabricated, to flex MP Joints which enabled an extension force to be applied to PIP joints (unable to apply serial cast due to short digits, and inability to control MP Joint)

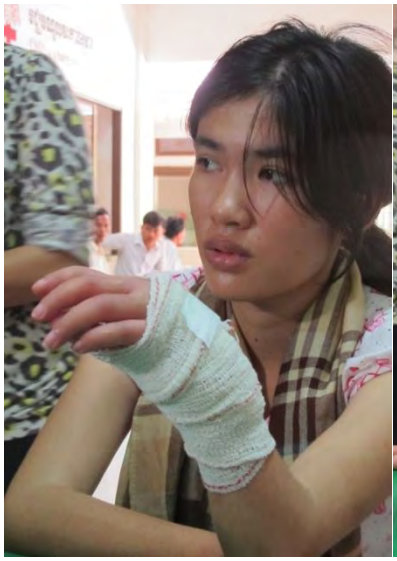
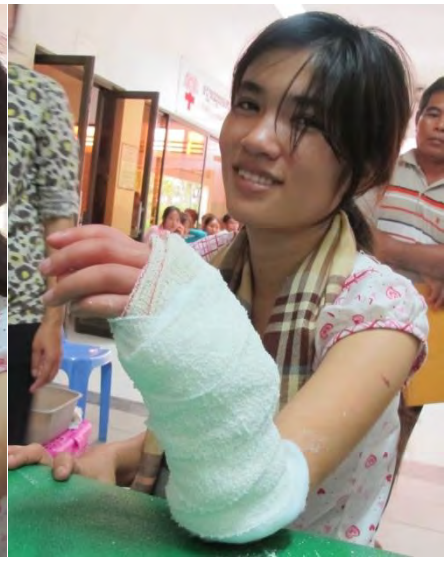
Mother was instructed in scar massage and passive stretch technique. Physio was instructed to review ulnar gutter and replace as PIP extension range improved

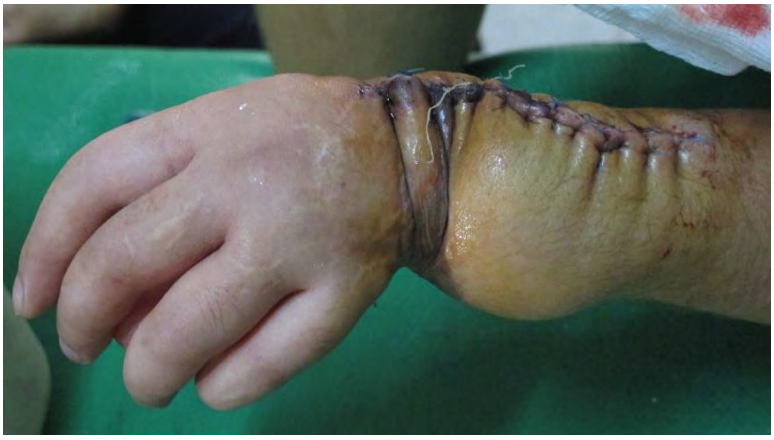


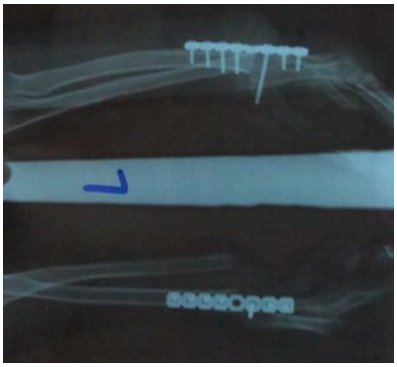



3. 18 year old girl who had suffered crush injury to hand and wrist in a rice machine 3 years prior. Developed Volkmanns Ischaemic contracture and preoperatively presented with significant fixed flexion deformity of wrist. Patient had excision of ulnar head, proximal row carpectomy, radial and ulnar osteotomy and wrist fusion. Her cast had been removed one day post op due to pain associated with a tight cast. She presented 2 days post op in significant discomfort, without any rigid support to her wrist.

Treatment: dressing removed, consultant called to review appearance of wound and swelling, new dressing, and plaster backslab was provided. Appropriate instructions given to local physio for ongoing management.

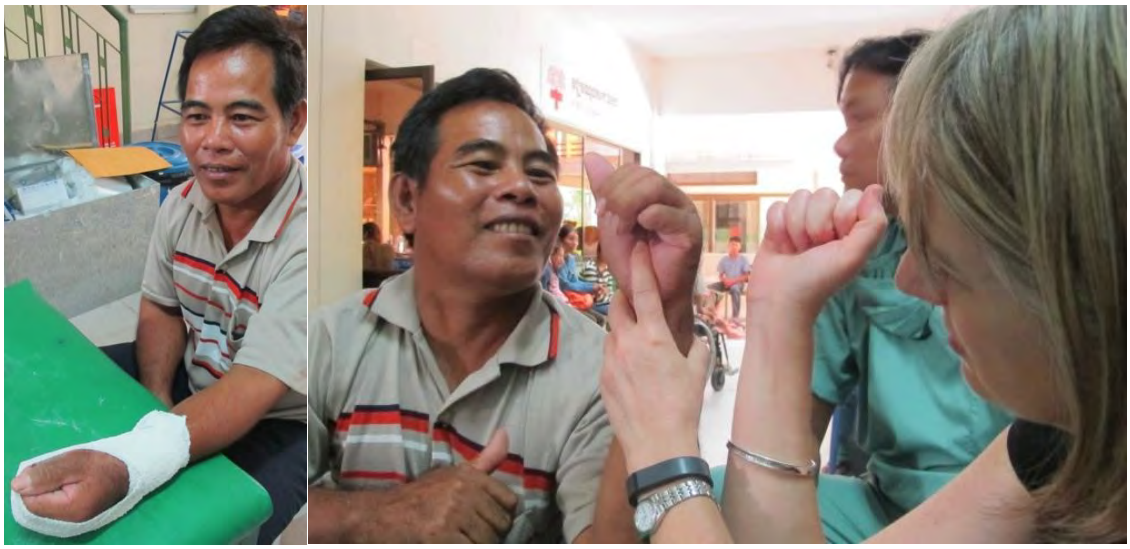




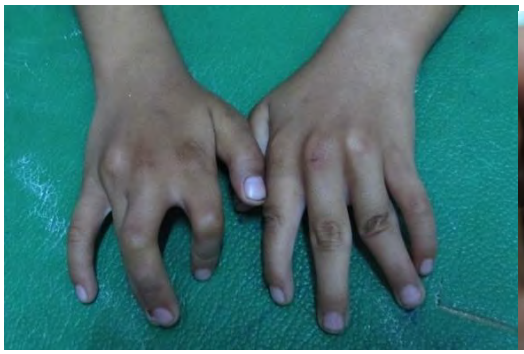
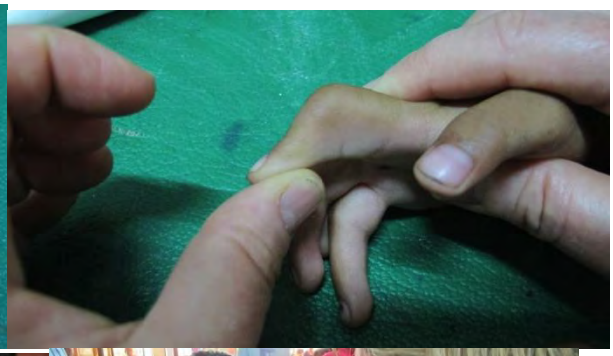
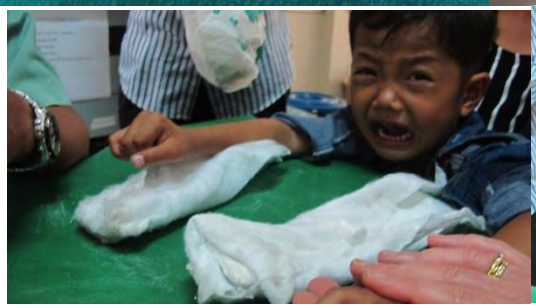
4. 58 year old farm worker presented 2 months following laceration to the radial aspect of his left wrist. He presented with a diagnosis of CRPS, reporting significant hypersensitivity at the scar, with swelling, stiffness of digits into flexion, and was not using the hand for ADL. He had sustained a previous little finger amputation unrelated to this injury.

Treatment: encouragement to use hand for ADL, flexion wrap, isolated and gross tendon gliding exercises, light resisted grip strengthening, desensitisation, radial nerve sliding exercises.

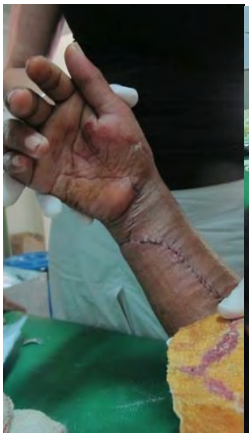
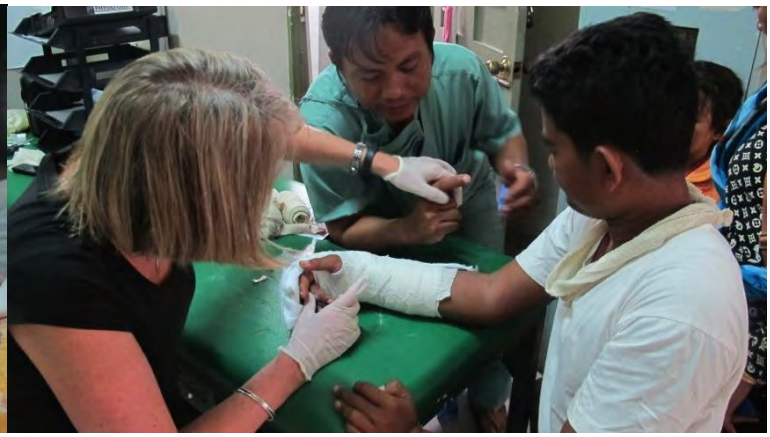
Note significant improvement in flexion range of motion following treatment.



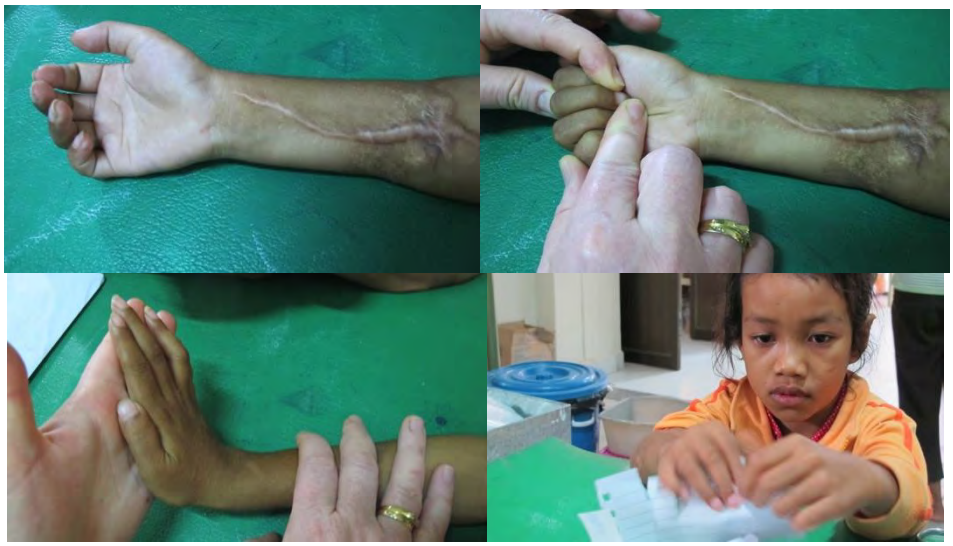
5. 4 year old screaming boy with suspected arthrogryposis who had fixed flexion deformity of right index finger PIP joint and tightness of long flexor tendons. Previous treatment provided by local physio included provision of volar plaster backslabs. These were applied nightly by the child's parents, and were deemed to be appropriate.
Treatment: the mother was advised to continue with night splinting and stretches during the day. The child was encouraged to draw, use utensils, and perform 2 handed tasks within the limit of his age, capacity and interest.


6. 29 year old male building contract worker who had lacerated flexor tendons and ulnar nerve. Surgical repair by Hand Unit, and presents with well fitting dorsal blocking plaster cast. The patient reported that the bandage was tight on his forearm, and so it was carefully removed and replaced. The patient and physio were instructed of the importance of avoiding any finger or wrist extension upon removal of the cast for dressing changes.
Treatment: postop passive flexor tendon protocol begun, incorporating instruction in passive flexion and blocked PIP extension exercises within the limits of cast. The overall treatment program was discussed, including appropriate progressions according to stages of healing

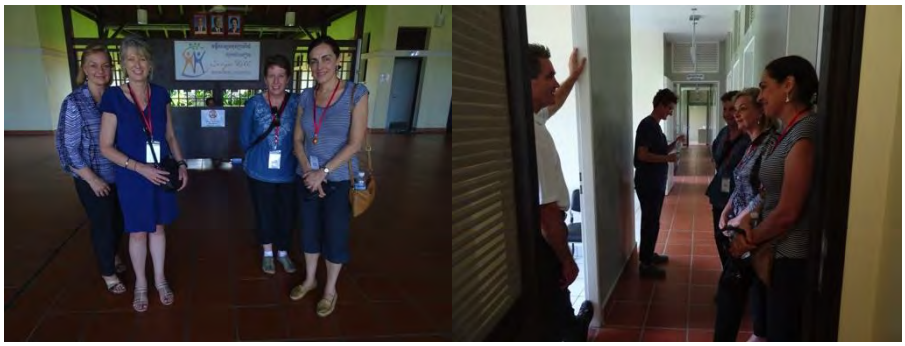



7. 10 year old girl presented 2 years after falling off a ladder and sustaining Volkmann's Ischaemic contracture. She presented with ulnar nerve weakness, and loss of active finger flexion, although her passive flexion and extension range was surprisingly good.
Treatment: instruction to mother and child for place and hold exericses, isolated DIP flexion, tendon gliding, folding and tearing paper, scar massage.



THURSDAY August 14:

Day trip to Sonia Kill Hospital in Kampot
Tour and lunch with Cornelia, Suzanne Gumley, Susan Ryan, Michele McClatchie, Cathy Merry, Anne Wajon



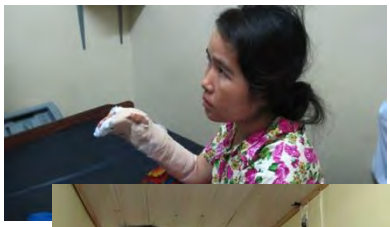
FRIDAY August 15:

SHCH/ CMC to meet with Dr Phot and physio.
Lectures provided to Dr Phot, Mr Russy, rheumatologist and other medical staff on the following topics:

a. shoulder impingement syndrome
b. lateral epicondylalgia
c. flexor tendon repair


Hand therapy interventions included:

1. Review of postop patient who had had FCR to extensor tendon transfer, MP joint releases by Dr Dave Stewart. The patient's postop care was discussed, incorporating appropriate progression of exercises and strategies for management from weeks 0-12



2. Follow up care was provided to patient who we had seen on Monday with burns to anterior aspect of thorax and neck. Silicone gel sheets were provided for patient to wear underneath his soft collar during the night.

Additional patients seen included:

3. 19 year old male 6 days post ORIF of olecranon fracture who presented with excellent range of shoulder, wrist and hand motion. He was instructed in specific exercises to regain full elbow extension / flexion, and forearm pronation /supination. This patient was advised to continue use of a sling for protection when out and about.

4. Post op review of patient following flexor tendon repair and median nerve with opponensplasty by Prof Gumley. Earlier discussion revealed that the patient would continue to have tight flexor tendons, and so a modified program was begun incorporating passive flexion, active extension exercises.

Following the morning session at CWC, we visited **National Paediatric Hospital** (NPH) to provide postop care to 3 patients. Unfortunately, two had already been discharged.

We met with the NPH physiotherapists who had not seen these patients prior to discharge.

University of Health Sciences where we met with Prof Gumley and the rest of the team to present a 20 minute talk on "The conservative management of Rheumatoid Arthritis" to various medical and surgical trainees.

Travel directly to the airport, arriving just before the torrential monsoon rains for our journey home.

Volunteer/Medical Administration
2014 Cambodia Trip Report: Suzanne Gumley –

1. Suzanne Gumley met with the Sihanouk Hospital Center of HOPE (SHCH) Hospital Director and discussed ways the Upper Limb Team could be of continued assistance.
2. Orientation for the new international visitor co-ordinator, Maly Yean.
3. Visited the newly operational Sonja Kill Hospital in Kampot, to evaluate the state of readiness for future Upper Limb Team assistance, volunteer staffing needs and accommodations

1. Discussion with SHCH Director.

The Director the SHCH expressed appreciation for the ongoing and valued support to the care of the poor in Cambodia. Particularly noted was the importance of long-term relationships that enable skills and expertise to be built year after year. The commitment of the SHCH to maintaining a relationship with the Upper Limb Team was reinforced.

2. Orientation of new SHCH International Coordinator.

HOPE*worldwide* has a new co-ordinator for international visits and visitors, Maly Yean. The HOPE*worldwide* focus on quality care and ongoing training for Cambodian medical staff requires many international volunteer teachers. Visitors are sent a hospital and clinic pre-briefing guide. Suzanne's meeting included reviewing and later revising the guide, as well as discussing the arrangements for hotels, transport and meals for visitors. Hospital volunteers receive a tour of the hospitals from Maly during their initiation. Maly and Suzanne discussed the importance of getting to know the hospital and clinic staff personally, and reviewing day to day activity regularly, so that the tour is not delivered in rote manner, but personalised according to the interests of the visiting medical staff. Maly is going to need some ongoing support in this new role, especially since she has a very hierarchical view of the medical teams, and will need to develop confidence that she too has a vital role in the HOPE team.

5. Provincial Kampot Hospital review

Kampot hospital has been open for a year providing outpatient care mostly to women and children in an underserved provincial area 4 hours drive South of Phnom Penh. A German sponsored construction company built the hospital in coastal Kampot in memory of Mrs Sonja Kill. HOPE*worldwide* has entered an agreement to staff and manage the hospital. Due to its remote location, there have been some issues finding and retaining medical and nursing staff. Suzanne, Hand Therapists Dr. Anne Wajon, and Kathy Merry with two visitors were given a tour of the hospital, by director Dr. Cornelia Haener from Switzerland, and staffing needs and facilities were discussed. Particular focus was placed on the needs and suitability for future Upper Limb Teams to be able to evaluate

patients and undertake surgery in the facility. Strategies to enable Hand Therapy provision were reviewed.

Visiting staff accommodation

Current expatriate staffing needs include a replacement GP, and with surgery due to start this year there is a need for an anaesthetist, OB-Gyn and Pediatric surgeon.
Although it is preferable for visiting professionals to come for 6-12 month terms, and come as a couple or team of 2 or more, options for selected visits by focussed specialist teams are present. There is accommodation on the hospital campus for temporary staff, a café next door, and the nearby town has a reasonable selection of eating establishments. The town of Kampot is built on a river that leads to the bay, the water is silted up during the rainy season, but clears in the dry season, and there is a small resort with a pool nearby.

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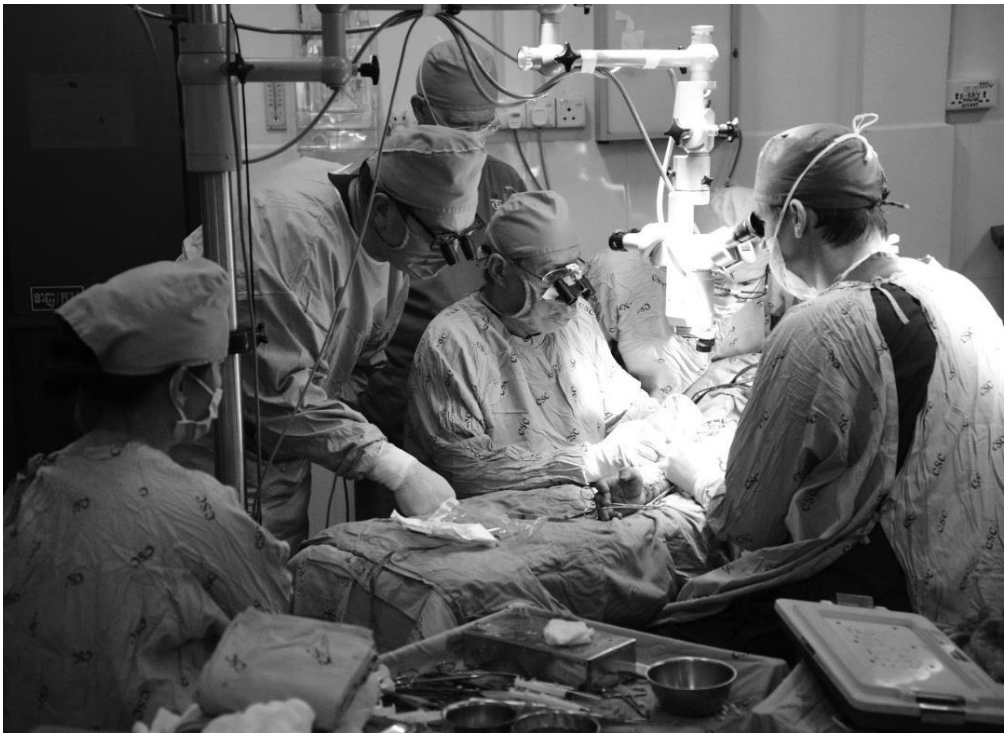
University of Health Sciences (UHS)

Thursday August 14:
Lecture program 2-4pm
Dr. Nick Smith - Compressive Neuropathy
Prof. Neil Jones - Tendon transfer principles.
- Congenital upper limb deformities.

Friday August 15:
2-4:30 pm. Six talks to the Surgery trainees:
Dr. Anne Wajon - Splinting for arthritis
Dr. David Stewart - Principles of local flaps.
Dr. xxxxxx - Rheumatology primer
Dr. Damian Ryan - Surgery for Rheumatoid conditions
Dr. Ben East - Basics of Biomechanics
Prof. Roongsak Limthongthang - Brachial Plexus Injuries

Meeting withProf. Bounchan Youttiroung, University of Health Sciences Deputy Dean for Postgraduate and International Relations with Profs. Buntha and Vuthy. Discuss teaching of the new cohort of 60 top students who will be taught in both English and French. Perhaps daily lectures from our group next visit.



With grateful thanks to:

- IFSSH
- AHSS
- Orthopaedic Outreach

for their generous support.