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ETHIOPIAN SOCIETY OF ORTHOPEDICS & TRAUMATOLOGY

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www.ethiopianorthopaedics-esot.org

# 14th ANNUAL GENERAL MEETING

# Scientfic Conference and Medical Exhibition

## Skylight Hotel(ET)


亚的斯亚贝巴丝路医院
ADDISABABA SILK ROAD HOSPITAL

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# Contents



**ESOT's Cover2018/ 19**

# Presidential Welcoming Address

**Guest of honor H.E. Dr.Amir Aman, Minster of Health, FDRE,**

**Dear ESOT member surgeons, conference speakers, Residents, Med students, Sponsors and invited guests;**

I am very pleased to welcome you to this year's Annual General Conference!

I would like to invite you all to this fascinating 14th Annual general orthopedic meeting, scientific conference and medical exhibition of the Ethiopian Society of Orthopedics and Traumatology (ESOT).

As the president of newly elected committee to run ESOT, I am happy to stand in front of you and give respect to all the giant orthopedic surgeons who found and maintained ESOT.

We have worked hard to make this 14th AGM influential.

This year theme is *Challenges of Ethiopian orthopedics practice*. It is selected because we need to discuss and be part of the policy making process with regarding to most of orthopedic practice in the country. Your Excellency, we understand Federal ministry of health is on the way to improve most of the polices. This would bring about fertile ground to enhance our practice and give a standard management for those who need it. Road map of sub specialization and standardization of the hospitals are among the changes we participated. We are delighted to pass our gratitude to your institution, FMOH.

As we all know we orthopedic surgeons are wanted in peace as well as war time. As a society we were happy to involve in some of the casualties which happened in the country. I also pass my respect to those participated in those times.

Dear collegues ,partners and distinguished Guests

Due to our helpful partners and organizers, we have made this event to be true at this 5 star new international hotel.

In this two days, annual scientific conference we have renowned international speakers who will share their knowledge skills and attitude. We also do have presentations of several articles and case discussions that would produce an impact on to our day to day activity and on the policy of our country. We will have audit report expect some discussions upon it.

Lunch and drinks will be served. At the end of this conference will hand over a gift to each one of you. I wish you to have a pleasant stay!

I thank you all for coming and participating at this conference.

I hereby invite his excellency Dr Amir Aman, Minstry of health, to address the surgeons and officaly open our scientific conference.

Geletaw T. Bekele, MD
President, ESOT

# EDITORIAL MESSAGE

Dear Colleagues;

Here is Volume 8!

The dream of having an Ethiopian Orthopaedic Journal (EOJ) or Ethiopian Journal of Orthopaedics & Traumatology (EJOT) is closer than ever.
The editorial team, nominated by this assembly last year, has been trying to address several issues around our beloved specialty and practice. I can't say we did our best but here is something. I believe there is power in staring! Definitely the newer generation advances this initiative forward and realizes our true journal. If we wrote such a magazine of 80 pages for 8 consecutive years, writing a journal of selected 4 Articles will not be that difficult! lets do it .
In this issue, we tried to cover wide areas addressed by ESOT members, residents and the Orthopaedic industry.

As ESOT is now getting bigger and greater every year (over 325 members), it is timely to have a dedicated editorial office with a secretariat staff working regularly and executing the daily activities of the society. The work load is getting tougher, needs to be shared and done everyday by full-fledged ESOT office. This was decided last year and this year we have to allocate the budjet.
With numerous brilliant yong G.Ps craving to Join orthopaedic residency more ortho departments opening, sub- Speciality Programs in orthopaedics emerging and huge number of patients needing our hands, we must excel in quality research, good practice exchange and harmony.

Moreover, I encourage every member to submit articles, reports, news and share any good practice with the wider Orthopaedic community. ESOT is our society and provided this forum to share our knowledge and exchange our research findings.
I thank all contributors to this edition, I thank current ESOT EC and I thank the sponsors who are always supporting us as we head to fulfil our dream.
Last, not least, I thank the secretaries in the mother Department at AAU-TASH for being patient with us when we prepare this edition, sometimes working very late past mid night. I thank my family for tolerating me once more in working late.

As always, I appreciate the contributing and participating residents. Tomorrow is a big graduation cerimony of AAU in the Millinium hall across the street. The mother Department will contribute 26 new seniors to ESOT full membership. We congradulate the graduating class of 2019. For better attendance, like in the past two years, I suggest combining ESOT AGM and graduation dates.

This Volume will be uploaded on our website. we encourage everyone to write and share something. please communicate any of us.

Enjoy Volume eight.
Blessings!

Dr. Biruk Lambisso Wamisho
Editor-in-chief

# Establishment of
## The Ethiopian Society of Orthopedics And Traumatology (ESOT)

Tezera Chaka MD, FCS(ECSA)
Associate Professor of Orthopedic Surgery
School of Medicine
Addis Ababa University

With the beginning of 1995 G.C. the consensus that was made among all Orthopedic Surgeons was to be organized under the Surgical Society of Ethiopia (SSE) which was believed as it should be serve as umbrella organization for all surgical specialties until such time that each surgical specialty associations established. Thereafter SSE would be transformed to "College of Surgeons" and will mainly focus on accreditation, certification, standardization etc of the profession. (Now it is high time to establish the "College of Surgeons" of the country due to the current flourishing of Surgical Trainings at the different Universities in order to assess, standardize, accredit, etc of their activities.)

Subsequently as the department of orthopedic surgery started to produce graduates and also with arrival of specialists graduated abroad the number of orthopedic surgeons started to grow up. In 2003 an interested group met in the Tikur Anbessa hospital surgical department conference hall for a brain storming discussion on how to establish a society. At the end of the meeting a steering committee was formed with the main task to draft the constitution and to accomplish the legalization process.

In May, 2003 the first meeting was conducted at Semien Hotel. The drafted constitution, the name- Ethiopian Society of Orthopedics and Traumatology (ESOT) –and the Emblem of the society were approved and executive members were elected.

On the 2nd of January 2004 the society has been officially registered by the Ministry of Justice and following in 2004 in the presence of officials from the Ministry of Health, delegates from sister societies and associations and other invited guests from inside and out side of the country an inaugural ceremony was held at the Ghion Hotel. There has been also a guest lecture as well as scientific paper presentations. After the second annual meeting and scientific conference which was held at Global Hotel Thursday 30th March 2006 with a pre-conference workshop on Club feet organized by the Society, Cure International and World Orthopedics Concern, during the subsequent years due to unforeseen circumstances (internal and external) the activity has tremendously declined.

In 2008 extra-ordinary meeting was called and new executive committee was elected which led the society to the resurgence of its activity. There after to date there were regular annual meetings and scientific conferences with panel discussions on important and timely issues and Workshops. Starting 2010 the society has gone further to start publishing a Scientific Journal of its own and has created its web-site.

The 2012 AGM and Scientific Conference have been colorfully celebrated at Hilton Hotel in the presence of His Excellency Ato Amin Abdulkadir Minister of Culture and Tourism with the theme "Medical Tourism & Sport Injuries". At this conference members has been honored with a recognition awards for their contribution to the profession at different categories. The first Operative AO course for all Orthopedic Surgeons in Ethiopia & their Nurses was successfully conducted in Dec. 2012 in Churchill Hotel. Both surgeons and residents benefited a lot. ESOT is growing tremendously. Therefore to uphold this noble endeavor, it is the duty of every member to actively engage our self to the fulfillment of the vision, mission and goals of the society.

## List of Ethiopian,Graduate ESOT **Founding Members**

1991
Dr. Ahmed Taha Makki ( Yemani Citizen )
Dr. Eskinder Afework
Dr. Lakew W/ Amanual

1993
Dr. Tawfik Abdulahi
Dr. Temesgen Fitru
Dr. Tezera Chaka
Dr. Worku Mekonnen
Dr. Wondimu Wolde

1994
Dr. Teshome Worku
Dr. Woubalem Zewdie

1996
Dr. Legesse Yigzaw
Dr. Solomon E/ Yonas

1997
Dr. Dereje Tekalign
Dr. Mesfin H/ Mariam
Dr. Tadesse Alemayehu

1998
Dr. Asfaw Ayele
Dr. Dagne Feleke

2000
Dr. Hailu Shewa-amare

2001- Dr. Gizachew Nigussie

2002
Dr. Birhanu Beyer
Dr. Wondaferaw Wondimu

2003
Dr. Biruk Zewdie
Dr. Genanew Admasu
Dr. Hailu Legesse

2004 - Dr .Manyazewl Dessie

2005 - Dr. Kinfe Araya
Dr. Zelalem Tamirat

2006 - Dr. Biruk Lambisso
Dr. Elias Ahmed
Dr. Daniel Ayalkibet
Dr. Kagnew Wubishet

2007 - Dr. Birhanu Ayana
Dr. Tesfaye Lema

2008 - Dr. Abebaw F/ Sillasie
Dr. Dereje Negash
Dr. Fekadu Teshome
Dr. Fisseha Bekele
Dr. Yiheyis Feleke

2009
Dr. Andargachew Workineh
Dr. Demissie W/ Kidan
Dr. Mekonnen Wordofa

# Graduates, continued

2010
1. Dr. Neguissie Seifu
2. Dr. Selamu Dessalegn
3. Dr. Solomon Awoke

2011
1. Dr. Tilahun Desta

2012
1. Dr. Daniel Teferi

2013
1. Dr. Alemayew Silassie
2. Dr. Bezu Chemeda
3. Dr. Mohammed Adem

2014
1. Dr. Nesredin Yusuf
2. Dr. Nigussie Hailu
3. Dr. Samuel Hailu
4. Dr. Tadesse Shimelis
5. Dr. Teshome Mosissa
6. Dr. Wondwossen Tekola
7. Dr. Sisay Birhanu

2015
1. Dr. Ebrahim Ahmed
2. Dr. Geletaw Tessema
3. Dr. Tekalign Tsegaye
4. Dr. Sham Abrahim
5. Dr. Worku Belay
6. Dr. Solomon Goshu

2016
1. Dr. Ephrem G/Hana
2. Dr. Esubalew Abebe
3. Dr. Habtamu Bayissa
4. Dr. Mamo Dikessa
5. Dr. Tewodros Daba
6. Dr. Tinsae H/Michael
7. Dr. Yoseph Zekarias
8. Dr. Zerihun Tamirat

2017
1. Dr. Adisu Chala
2. Dr. Biruh Wubishet
3. Dr. Leul Merid
4. Dr. Yared Solomon
5. Dr. Milkeys Tsehaye
6. Dr. Getnet Asnake

2018
1. Dr. Abduhrehaman Ahmed
2. Dr. Abiy Worku Haile
3. Dr. Ananya Kassahun Admassu
4. Dr. Ermias Gizaw H/Meskel
5. Dr. Eskinder Kebede Tadesse
6. Dr. Getayie Temesgen Kebede
7. Dr. Zeynu Zuber
8. Dr. Mahder Eshete Yilma
9. Dr. Melesse Gardie Belete
10. Dr. Misgana Temesgen Workneh
11. Dr. Mnewer Yirga Ahmed
12. Dr. Mohammed Issa Dawod
13. Dr. Nardos Worku Ketema
14. Dr. Samson Tule Sadiko
15. Dr. Seid Mohammed Yasin
16. Dr. Sintayehu Bussa Teresa
17. Dr. Sisay Belete Berga
18. Dr. Tadesse Esayas Wae
19. Dr. Yebchaye Wondafrash Gemeda

## Members Trained in Orthopaedics Abroad

1. Dr. Bahiru Bezabih
2. Dr. Berhe Gebreselassie
3. Dr. Duane Anderson
4. Dr. Geoffery Walker
5. Dr. Lishan Assefa
6. Dr. Mesfin Etsub
7. Dr. Rick Gardner
8. Dr. Tewodros Tilahun
9. Dr. Tim Nun
10. Dr. Zegene Taye
11. Dr. Amare Tessma
12. Dr. Guetahoun Yetbarek
13. Dr. Mengistu
14. Dr.
15. Dr.

# Residents of BLH

## Graduateing Class

1. Dr.Abdirashid Ismael
2. Dr.Ahmed Seid
3. Dr.Ayele G/Selassie
4. Dr.Bahru Atnafu
5. Dr Baru Legesse
6. Dr.Berhane Kassa
7. Dr. Biniyam Teshome
8. Dr. Birhanu Ayinetaw
9. Dr. Bruh Keflae
10. Dr. Chernet Leka
11. Dr. Chol William
12. Dr. Fasil Nigusse
13. Dr. Habtamu Tamrat
14. Dr. Helawi Tewabe
15. Dr Hiwot Hailu
16. Dr. Mahamed Areis
17. Dr. Mengistu G/Yohanes
18. Dr. Michael Habtu
19. Dr. Moa Chali
20. Dr. Mohammed Shikur
21. Dr. Mulusew Tibebu
22. Dr. Oumer Seid
23. Dr. Tewodros Asegie
24. Dr. Thomas Melese
25. Dr. Tofik Kedir
26. Dr. Tsega Yilma

## R4,AAU

1. Dr. Admasu Tibelt
2. Dr. Ahmed Abdusemed
3. Dr. Eyuael Ambaye
4. Dr. Fikir Tesfaw
5. Dr. Fitsum Lakew
6. Dr. Fre Alemseged
7. Dr. Getachew Berhe
8. Dr. Getahun G/Egziabher
9. Dr. Gulilat Zerihun
10. Dr. Khalid Zeki
11. Dr. Mariamawit Baye
12. Dr. Seyoum Berihun
13. Dr. Silamlak Sisay
14. Dr. Tegenu Dinku
15. Dr. Teshale Ayana
16. Dr. Tewodros Taye
17. Dr.Tsegaye Mamo
18. Dr. Yonas Amiga
19. Dr. Yazachew Yimenu
20 Dr. Zenaye Wude
21. Dr. Teshome Tena
22. Dr Dejene Feyisa

## R3,AAU

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2. Dr. Habtamu Akalu berta
3. Dr. Melkamu Alemu Senbeta
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7. Dr. Naol Worku Moroda
8. Dr. Samuel Tesfaye Shiferaw
9. Dr. Robel Sirak Zewde
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15. Dr. Daniel Banksira Shikur
16. Dr. Gemechis Amano Geleto
17. Dr. Matiyas Seid Mohammed
18. Dr. Senay Mekonen Teferi
19. Dr. Fantahun Solomon Nurlign
20. Dr. Abdo Dames Shafi

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2. Dr.Abel Jemberu
3. Dr.Addisu Deribe
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7. Dr.Beakl Bogale
8. Dr.Elleni Atnafu
9. Dr.Elsa Daniel
10. Dr. Eyob fisseha
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12. Dr.Mehari Temsgen
13. Dr.Melkamu Tafesse
14. Dr.Mohammedamin Kelil
15. Dr.Samrawit Esayas
16. Dr.Shikuria Lema
17. Dr.Tadesse Debrya
18. Dr.Tadesse Dugasa
19. Dr.Tesahun Tekle
20. Dr.Tesfahun Tekle
21. Dr.Tewodros Fikadu
22. Dr. Yalew Tsegaye
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2 Dr .Alpha Seifu Ail
3 Dr.Belay Tsega Ayenew
4 Dr. Biruk Fekadu Tebebie
5 Dr. Daniel Demie Abiebie
6 Dr. endrias Habte Belay
7 Dr. Getaneh workneh Kass
8 Dr. milkiyas Tsegaye Haile
9 Dr. Shlkure Esmale Mossa
10 Dr.Tamirat Hanoko Hadello

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2 Dr. Yabsra Tadesse Abebe (Sphmmc)

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4. Dr. Binyam Biresaw Netsere
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5. Dr. Diress Yeshaneh
6. Dr. Zerfu Bala
7. Dr. Dawit Asmamaw
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9. Dr. Workineh Mengsha
10. Dr. Abrham Amare
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6. **Dr. Adugnaw Bogale Worku**
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6 Dr.Yasin Awil Elmi
7 Dr. Mohamed Mohamud Farah

# List Compiled by Dr. Tezera & Dr. Mnewer
# Thankyou !!!

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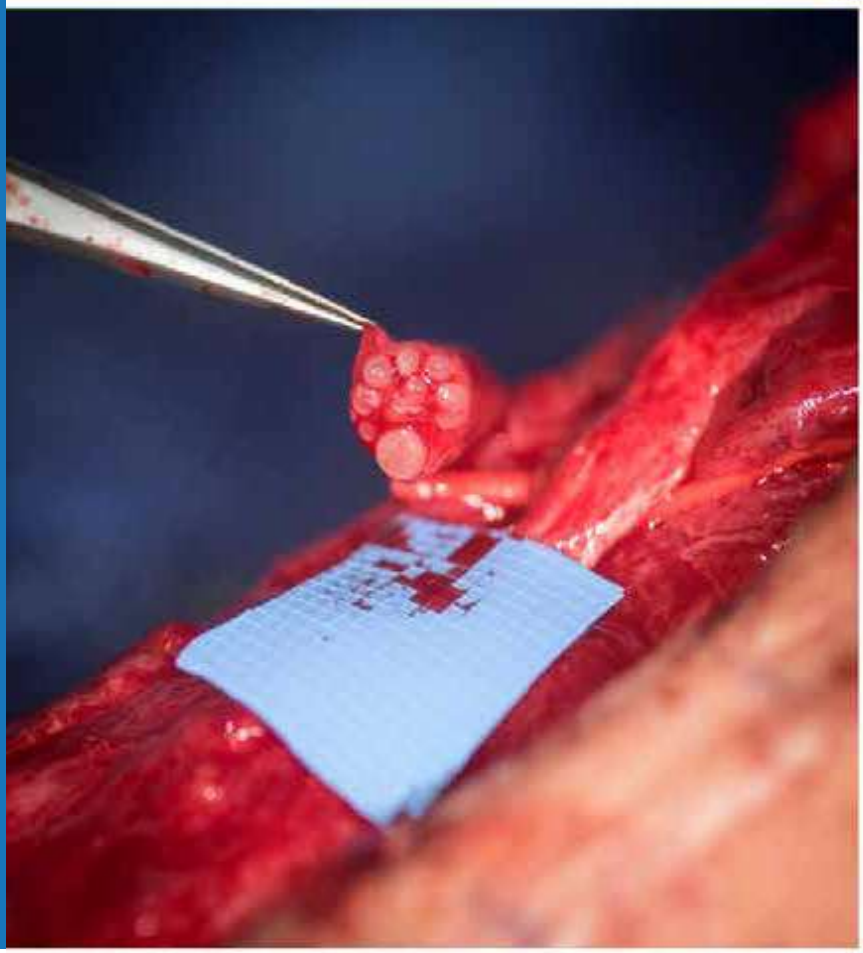
# Nerve Injury and Soft Tissue Reconstruction: Principles and Surgical Techniques
## 5th-6th April 2019

## CURE Ethiopia Children's Hospital and St. Paul's Hospital MMC



**Scott H. Kozin, MD**
**Chief of Staff, Shriners Hospital for Children-Philadelphia**

**Duretti T. Fufa, MD**
**Orthopaedic Surgeon, Hospital f Special Surgery, Ne York**

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# POWERED BIONIC LEG FOR AMPUTEES:- DESIGNED IN ETHIOPIA

**Ers. TSEDEY MICHEL, AHMED SEID, BILAL BEDAWI, BISRAT NEGASH, NATNAEL H/MARIAM, SOCRATES G/MEDHIN**

Prosthesis is a mechanical device which is used to replace amputated limbs in the hope of retaining the functions of the amputated limb. The concept of prosthesis has long been known and implemented all around the world including Ethiopia. the usual design doesn't have comfort, needs extra metabolic energy to move the prosthetic leg, changes the shape of the residual limb and It has a tendency producing infection and this leads to further amputation.

Powered Bionic foot is a muscle-controlled machine used to improve the mobility of a people with transtibial (TT,BKA) amputation. With this foot the amputated person can move easily on stairs, Rough ways, Sloppy ways etc. with high stability, high comfort, Reduced requirement of metabolic energy and Muscle Controlled like never been before.

This project is new to our Country Looking this as problem we design powered bionic foot by meeting international standards, and the design was achieved using scientific engineering and medical methods like Mat lab, SOLIDWORKS PREMIEM 2016 and SOLIDWORKS SIMULATION 2016 software), and standards ISO 10328 (structural test for lower limb prostheses), ISO 22675 (Testing of ankle-foot devices and foot units). To make/manifacture the prototype and test the design, we are waiting for importing components.

The project is designed by Electro-mechanical engineers, with advice of Dr. Biruk Lambisso ,Volunteer AKA patient Alemayeu, Mr, Alemayehu as business advisor, and MINT(ministry of innovation and technology). The first model prototypes are ready. During the upcoming ESOT 14the meeting we will present all the detail design work

Electro-Mechanical Engineers team

# Pathologic Fracture of The Femur in Brown Tumor; An Unusual Presentation of Primary Hyperparathyroidism; Case Report

1Second year Resident, Orthopedics Center, Tikur Anbessa Specialized Hospital, Addis Abeba University, Ethiopia
2 Senior Resident, Department of Radiology, Tikur Anbessa Specialized Hospital, Addis Abeba University, Ethiopia

Amanuel L, Sofiya D

Background: Brown Tumor or also known as Osteitis Fibrosa Cystica (OFC) is the Muskulo-Skeletal manifestation of the metabolic abnormality due to primary hyperparathyroidism.

Primary hyperparathyroidism is an endocrine disorder that arises with excessive production of parathyroid hormone from a solitary adenoma or diffusely enlarged parathyroid gland.

With the increased availability of routine calcium screening, the clinically symptomatic manifestations are believed to be rare especially in the western setups. Presenting with a pathological fracture is very unusual. We experienced a case where brown tumor developed in the proximal femur of a 25-year-old female patient which then fractured while being massaged by a bone setter.

Case Report: A 25 years old female patient presented with a worsened Left thigh pain of 03 weeks;' which began after she was massaged by a bone setter. Since, she's unable to stand or walk and has left thigh deformity. She has history of bilateral hip and thigh pain, lower back pain, pain over the arms of around 06 months. She complains of weight loss, decreased appetite, night sweats, global headache of same duration. No history of smoking, cough, chest pain, swelling in the breasts, neck or anywhere else. No history of previous fracture, facial or leg swelling. No family history of similar illness.

On physical examination, she was acutely sick looking, her vitals were stable. There's no palpable neck swelling or swelling elsewhere. Pertinent finding is on the Muskulo-skeletal system; her Left thigh was swollen, deformed and externally rotated leg. No wounds. Tender to palpation, the distal neurovascular structures are intact. There's also tenderness on palpation over the contralateral femur and both arms.

Her Lab results show a normal CBC profile and RFT but an elevated Alkaline phosphatase -720 ; the initial serum Ca2+ level is elevated 15.4mg/dl [range 8.4 – 10.2]. She was then started on IV Bisphosphonates, fluid diuresis and her Ca2+ decreased to 9.5mg/dl. Serum PTH was not available.

She then had X-rays of the both Femurs, Chest, Skull, the hands and an Abdominal ultrasound, Thyroid scan and a Biopsy.

**Figure 1. On Ap and Lateral Xray of Left Femur; an expansile lytic lesion over the Left femur with pathologic fracture. Gross osteopenia seen and round subperiosteal erosion on the Right femur shaft.**

Figure 2. On Chest X-Ray; Gross Osteopenia, eccentric, characteristic subperiosteal right humerus shaft lesion. Distal clavicles also involved. No periosteal reaction, soft tissue swelling present.

Figure 3. Subperiosteal erosions at the middle phalanx of the 2nd and 3rd right digits. Possible soft tissue calcifications in the carpus

Figure 4. Skull X-ray Ap and Lateral; The typical salt and peper appearance of skull, with multiple, round bony cystic spaces are seen here. Maxillary involvement is not marked.

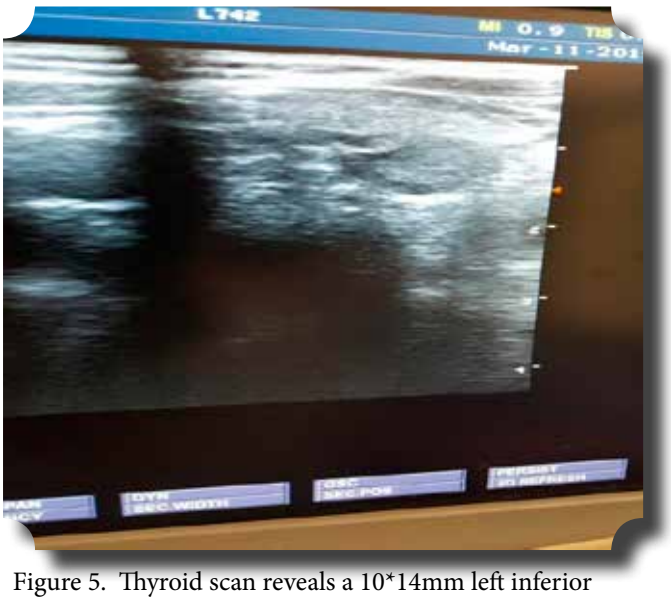
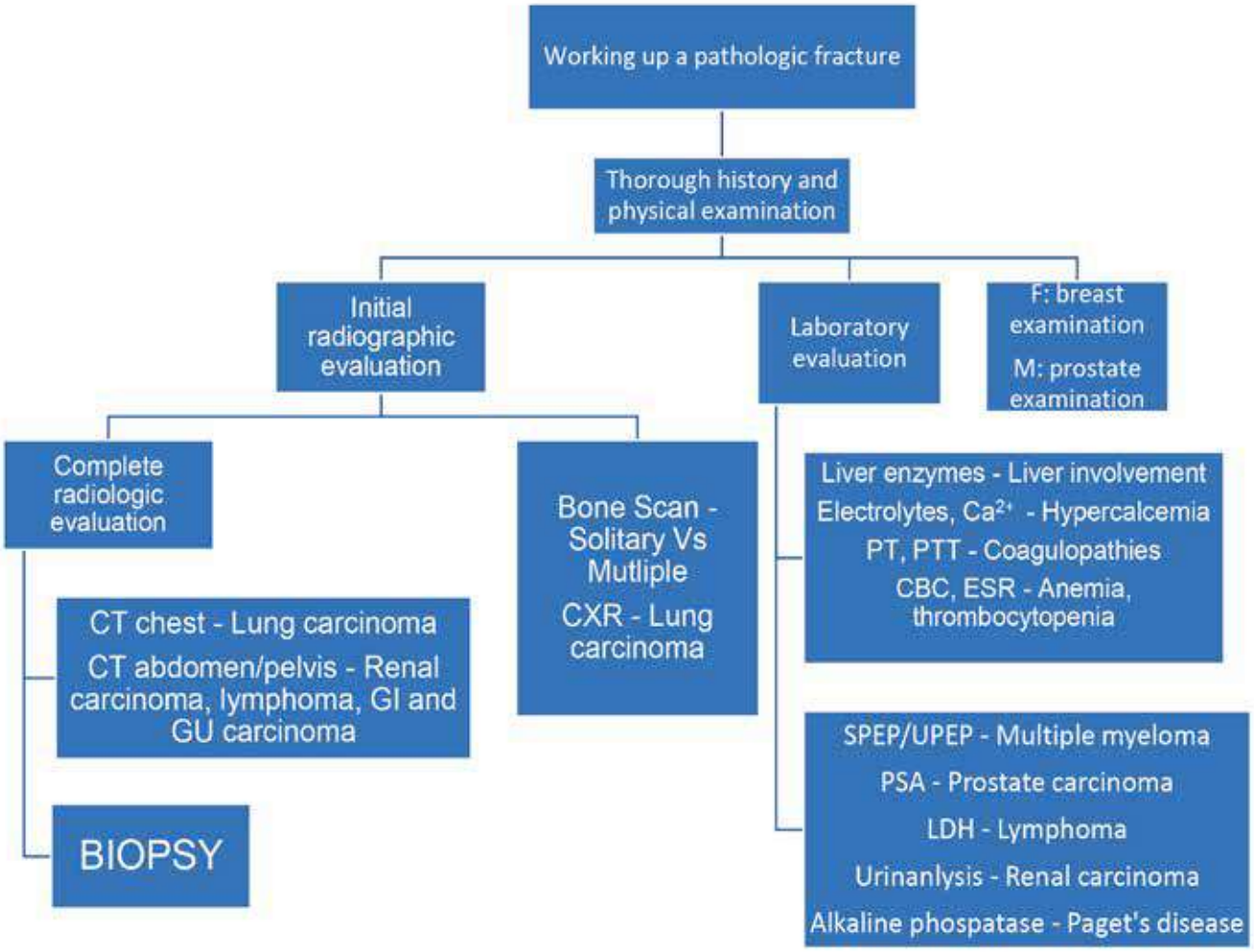



Figure 5. Thyroid scan reveals a 10*14mm left inferior thyroid, round swelling [area shown by the arrow]. Possible solitary adenoma of the parathyroid.

**The histology sections show** fragments of cortical and trabecular bony fragments spaces filled with hemoraghe and pelefrabecular fibrosis; few cystic changes and variable sized filled vessels admixed with increased osteoclastic giant cells, which goes for Brown tumor as well.

**Mneck's** recommendation to fix a pathologic fracture includes if; a) The ratio of width of lesion/diameter of bone is >0.6 b) There's axial bone involvement of 30mms c)Cortical destruction of more than 50%. Open reduction and internal fixation using intramedullary nail was done along with excision of the parathyroid adenoma.

Figure 6. Ap and Lateral X-Ray of Left Femur, after Intramedullary nailing was done for this patient.



# Familial Madelung Deformity Case Report

## CURE Children's Hospital, Ethiopia

**Rick Gardner FRCS (Tr+Orth)**
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CURE Ethiopia Children's Hospital
Addis Ababa

**Teshome Tena**
Orthopedic Resident
Addis Ababa University

Background:Leri-Weill Dyschondrosteosis (L is a rare genetic disorder caused by deletions or mutations in the SHOX gene. It is classically characterized by short stature, mesomeliaand Madelung deformity. Madelung deformity, abnormal alignment of the radius, ulna, and carpal bones at the wrist, typically develops in mid-to-late childhood and is more common and severe in females.

Study: We report the case of three female siblings(12, 14 and 15 years of age) presenting with bilateral wrist deformity. The youngest daughter had left side wrist pain which limited her daily activities. All have short stature below 5th centile on CDC growth chart, bilateral Madelung deformity and mesomelia which are suggestive of Leri Weill Dyschondrosteosis.

Conclusion:Leri Weill Dyschondrosteosis should be suspected in female children with short stature and wrist deformity. Families canbe counseled for genetic testing. Distal radius deformities associated with Madelung deformity, can be treated successfully with surgery especially in the presence of pain and cosmetic discomfort.

Keywords:Leri-Weill syndrome, Pseudoautosomal region,SHOX gene,Mesomelia,Madelung deformity, short stature

# Clinical outcomes of Surgical Implant Generation Network ( SIGN) intramedullary Femur fin nail

**Teshome Tena Tefera**
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Addis Ababa University, Ethiopia.

**Background:** Currently the standard treatment for femur shaft fracture is locked intramedullary nailing with fluoroscopy. SIGN fin nail is designed to treat femur and humerus shaft fracture without image intensifier. The purpose of this study is to evaluate outcome of fin nail done from April, 2013 to December, 2019, in Black Lion Hospital, Ethiopia.

**Methods:** A review of SIGN database and patient's chart was performed for patients with femur and humerus fractures treated with SIGN fin nail, which at the time of the study totaled 68 patients with 71 fractures. 27 patients who have at least three months of follow up were studied.

Main clinical outcome measures: union, malunion, infection, > 90% knee range of movement, painless weight bearing , implant failure and refracture

**Results:** Totally 27 patients with 28 femur fracture included in the study. The average follow up is 54.24 weeks. There were 24 males and 3 females. The mean age is 25.37 (ranging 14 to 47). Road Traffic Accident is major cause of trauma (88.8%), followed by others (7 %) and fall (3.7%). 26 (92.85%) and 2 (7.15%) are closed and open fractures respectively. Right and left side account 50% each of which middle 16(57.14), distal 10(35.71%), and proximal 2(7.14%). In all patients there is no nonunion, malunion, infection, and implant failure. One patient who had ipsilateral patellar and intrarticular distal femur fracture has less than 90% knee flexion. All patients have painless weight bearing.

**Conclusion:** over all there is excellent result of fin nail insertion for femur shaft fractures in terms of union, knee range of movement, implant failure, refracture and painless weight bearing.

**Keywords:** fin nail, non union, malunion, and implant failure

SIGN
FRACTURE CARE
INTERNATIONAL

# The Burden of Malignancy at Black Lion Hospital (TASH): Two decades analisis

Biruk L.1 Amanuel L.2
1 Associate Professor, Orthopaedics Center, Tikur Anbessa Specialized Hospital, Addis Abeba University.
2 Second Year resident, Orthopaedics Center, Tikur Anbessa Specialized Hospital, Addis Abeba University.

**Abstract:** In two decades (1989-2009 G.C ) Over 20thousend adult Patients with Malignancy, excluding haematologic Malignancies,were seen at TASH.

**Methods:**The source of information is the Tikur Anbessa Specialized Hospital which is the Country's largest and major diagnostic and treatment center for cancer.The patients demographics and selected variables are recorded from their medical records onto Ms.Excel and then analyzed using IBM SPSS(V.24). The database spans from 1989 G.C upto 2009 G.C.The following variables were included.

1. Demographic Data: name, sex, residen tial address/Region/
2. Tumor-Related Data: date of diagnosis, actual diagnosis, Stage of disease
3. Source of information: Hospital number

In this study pediatric patients(less than 14 years) and leukemia cases are excluded.

**Results:** A total of 21,848 cases have been registered excluding the pediatric and those with leukemia. Among these cases the majority were female 72% (15,835) and males account for the 28%

**Overview:**The burden of malignancy is on the rise, according to WHO's report the number of new cases is said to increase by about 70% over the next two decades. It is the second leading cause of death worldwide, with 8.2 million and 8.8 million deaths in 2012 and 2015 respectively; which is nearly one in six deaths. Around 2/3rd of these deaths are in low and middle income countries like Ethiopia.

These countries also face the challenges of Late-stage presentation and lack of diagnostic and treatment capabilities. According to WHO only 35% of low income countries can provide pathology services for the public while treatment facilities are available in less than 30% of low income countries. This study aims to show the incidence, the progression, stages of presentation and overall burden of cancer cases seen at Tikur Anbesa Specialized Hospital from 1989 G.C upto 2009 G.C.

**Introduction:** Cancer or also known as malignancy or neoplasm represents a wide range of diseases affecting the different parts of the human body. These conditions are characterized by their ability to grow and multiply beyond their usual boundaries, to the extent of invading adjoining parts of the body and spreading through multiple means to other organs and tissues. The most common cancers in the African continent are cancers of the cervix, breast, liver and prostate as well as Kaposi's

sarcoma and non-Hodgkin's lymphoma. The increasing burden of cancer in the population can be attributed to the increased life expectancy and the unhealthy lifestyle: smoking, drinking, sedentary life style, dietary factors. Human papilloma virus and hepatitis B and C virus infections are the causes for the leading cancers in the continent; cervical cancer and liver cancer.

(6,013). A steady increase in the total number of cases is observed in the 21 years period.

The mean age at diagnosis was 45, with age ranging from 14 to 98. Most patients are from the capital covering 39.8% of the total.

The top three cancers overall are cervical ca, breast ca and colorectal ca. Unfortunately, 83.9% of cases seen are of late presentations as seen with their High Grades and presence of metastasis.

Table1:- Case distribution across the different regions of the country

| Address | Frequency | Percentage | Population size/2008 |
|---|---|---|---|
| Addis Abeba | 8692 | 39.8 | 3,146,999 |
| Oromia | 5984 | 27.4 | 28,066,993 |
| Amhara | 3415 | 15.6 | 20,136,006 |
| Tigray | 739 | 3.4 | 4,565,000 |
| SOUTH PNNs | 2115 | 9.7 | 15,745,002 |
| Somali | 201 | 0.9 | 4,559,997 |
| Afar | 54 | 0.2 | 1,448,997 |
| Gambella | 56 | 0.3 | 258,999 |
| Harari | 357 | 1.6 | 209,000 |
| Benshangul-Gumuz | 51 | 0.2 | 656,000 |
| Dire Dewa | 177 | 0.8 | 428,000 |
| Unknown | 7 | 0.1 | - |
| Total | 21,848 | 100 | 79,221,000 |

Cervical cancer is the most common diagnosis in this 21 year period, accounting for 30% of the total cases; followed by breast 27.5% and

Table 2:- The Frequency of Top Ten cancers in Women from 1989 -2009 G.C

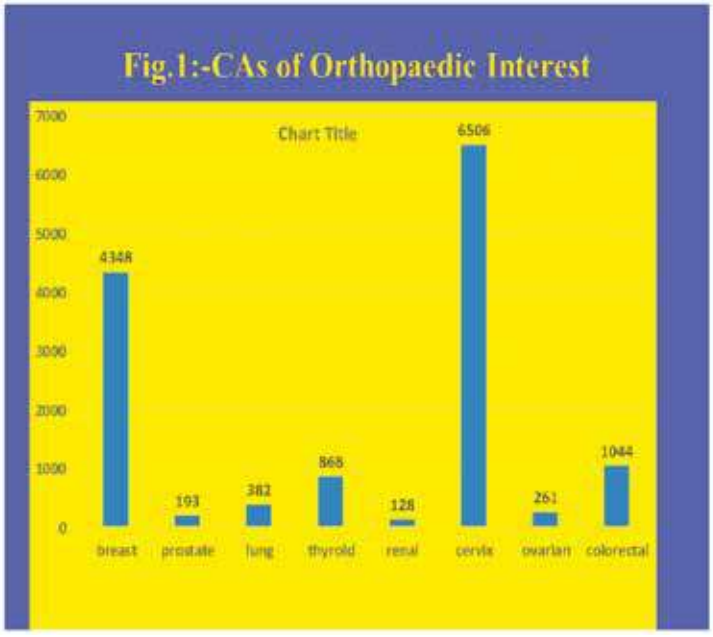
| No | Diagnosis | Frequency | Percentage | ICD(10th ed.) |
|---|---|---|---|---|
| 1 | Cervical | 6506 | 41.1 | C53 |
| 2 | Breast | 4348 | 27.5 | C50 |
| 3 | Thyroid | 579 | 3.7 | C73 |
| 4 | Colorectum | 439 | 2.8 | C18-20 |
| 5 | Skin | 362 | 2.3 | C44 |
| 6 | Ovary | 261 | 1.6 | C56 |
| 7 | Nasopharynx | 245 | 1.5 | C11 |
| 8 | Oesophagus | 202 | 1.3 | C15 |
| 9 | Trachea,Bronchus,Lung | 185 | 1.2 | C33-34 |
| 10 | Vulva | 162 | 1 | C51 |

In men the leading five cancers are Colorectal (10.1%), Nasopharynx(8.2%),Skin Cancers(5.6%), Thyroid Cancers(4.8%) and Bone Cancer(4.6%).

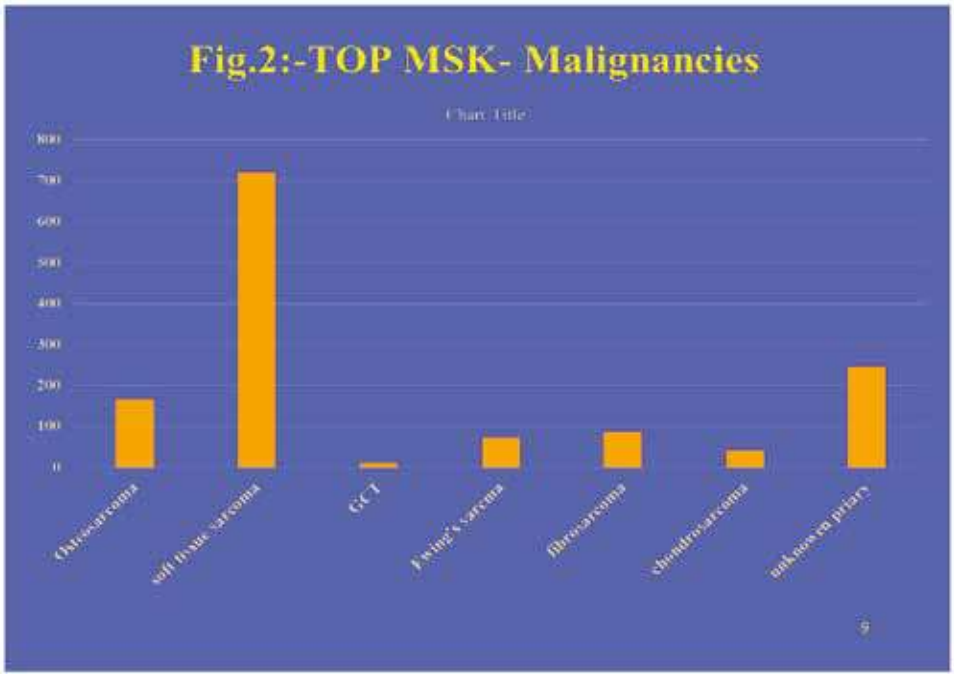
Table 3:-The Frequency of Top Ten cancers in Men from 198

| No | Diagnosis | Frequency | Percentage | ICD |
|---|---|---|---|---|
| 1 | Colorectum | 605 | 10.1 | C18 |
| 2 | Nasopharynx | 491 | 8.2 | C11 |
| 3 | Skin | 336 | 5.6 | C44 |
| 4 | Thyroid | 289 | 4.8 | C73 |
| 5 | Bone | 275 | 4.6 | C40 |
| 6 | Trachea, Bronchus & Lung | 197 | 3.3 | C33 |
| 7 | Prostate | 193 | 3.2 | C61 |
| 8 | Kaposi's Sarcoma | 184 | 3.1 | C46 |
| 9 | Brain, Nervous System | 165 | 2.7 | C70 |
| 10 | Tongue | 164 | 2.7 | C01 |

Cancers of Orthopaedic interest include Breast, Prostate, Thyroid, Lung, Kidney, GI etc. Primary malignant bone tumors account for 1.9% of all malignancies and are increasing at an alarming rate



The leading Musculokeletal Tumours are Soft tissue sarcomas followed by Osteosarcoma seen at Tikur Anbessa Specialiazed Hospital Orthopaedics Center. They account for 10% of patients waiting for admission while only around 100 tumor related surgeries are done every year which is accounts for 7% of all procedures.




**Conclusion:** The management of tumors is a complex and Mutlidisciplenary encompassing Orthopaedics, Pathology, Radiology, Oncology, Physiotheraphy etc; for best possible outcome the areas of training highly skilled professionals, setting up well equipped facilities, advanced imaging and Labs as well as nursing care and nutritional support needs focus and coordination as it's the backbone of the service. The development of a national cancer registry programme fully endorsed and supported by the Ministry of Health and other stakeholders needs urgent consideration so as to develop Cancer prevention, early detection and treatment policies.

**Acknowledgement:** ICRC Ethiopia partially Funded the date Collection

# Patient and Public Engagement: Opinions on Healthcare and Areas for Improvement

Leulseged A., Lemma S., Sigamoney K., Koo K., Biruk L.

**Introduction:** Patient and Public involvement(PPI) ensures that the patients and public service users and carers can influence their own care and treatment, have a say in the way services are planned and run; and help bring about improvements to the way care is provided. Patients have a right to good treatment in a comfortable, caring and safe environment, delivered in a calm and reassuring way. Patients should be provided with information to enable them to make choices, to feel confident and in control. They need to be talked to and listened to as an equal and be treated with honesty, respect and dignity. This is a follow up to a study done at the Orthopaedic Centre at Tikur Anbessa Specialized Hospital, Addis Abeba, Ethiopia in 2018.

**Method:** A PPI questionnaire was designed with questions covering four broad areas: patient and visitor feelings/opinions, staff factors, hospital factors and health education. This questionnaire was translated to Amharic and administered to a random sample of 100 patients and relatives located on the Orthopaedic ward and visiting the Orthopaedic clinic at Tikur Anbessa Specialized Hospital over the course of 1 month.

**Results:** When asked what they felt was the most important factor in receiving treatment 51% of patients and public documented that it was understanding their condition which has increased from 24% last year. 25% politeness of the treating physician;19% reported Good communication and safety whilst in hospital;1% documented cleanliness while 4% reported speed of treatment.

When asked about their feelings about attending Tikur Anbessa Hospital 9% responded very good; 45% good and speed with which they made progress with treatment 9.52% responded very good; 35% good. When asked about Understanding the condition for which they are receiving treatment 6% responded very good and 47% good.

**Conclusion:** As a follow up to last year's PPI project, the findings show improvements in public awareness of the Health Care system, public health education and overall satisfaction with the service they receive. Areas of improvement include speed of treatment, thorough explanation of their condition and since service users believe that understanding their condition are key to their satisfaction staff should bear this in mind when managing patients. The plan is to implement the findings here and follow up with subsequent studies.

# Patient-Reported Outcome Measures; in Operatively Treated Acetabular Fractures

Hailu S., Leulseged A., Lemma S., Yates J., Sigamoney K., Koo K., Wynn Jones H., Clayson A.

**Purpose**
Patient Reported Outcome Measures (PROMs) are a feedback measure from patients regarding their experience in care. This feedback can be used for improving the standard of healthcare. This study aims to record PROMs data from patients requiring acetabular fixation for trauma at the Orthopaedics Centre, Tikur Anbessa Specialized Hospital in Ethiopia.

**Methods**
A health survey SF-36 questionnaire was translated to Amharic and given to patients who underwent acetabular fixation between 2016 and 2018. The eight dimensions included in the questionnaire were physical function, social function, role limitations due to physical and emotional problems, bodily pain, vitality, mental and general health perception of the patients. There was a minimum follow up of one year. Acetabular fracture types were based on the Judet and Letournel classification. All statistical analysis was performed on SPSS software (IBM® SPSS® Statistics).

**Results**
140 patients were eligible for inclusion in this study, of which 40 completed the questionnaire. There was a mean age of 35 years with 11 (27.5%) females and 29 (72.5%) males. 31 (77.5%) of the cohort were classified as associated fractures, T-Type being the most common, followed by ABC and Transverse with posterior wall. From the simple fractures, Posterior wall is the most common. Of these the Transverse and ABC type were those reported to have some pain, whereas from the simple fracture type a Posterior Wall fracture was reported to have pain.

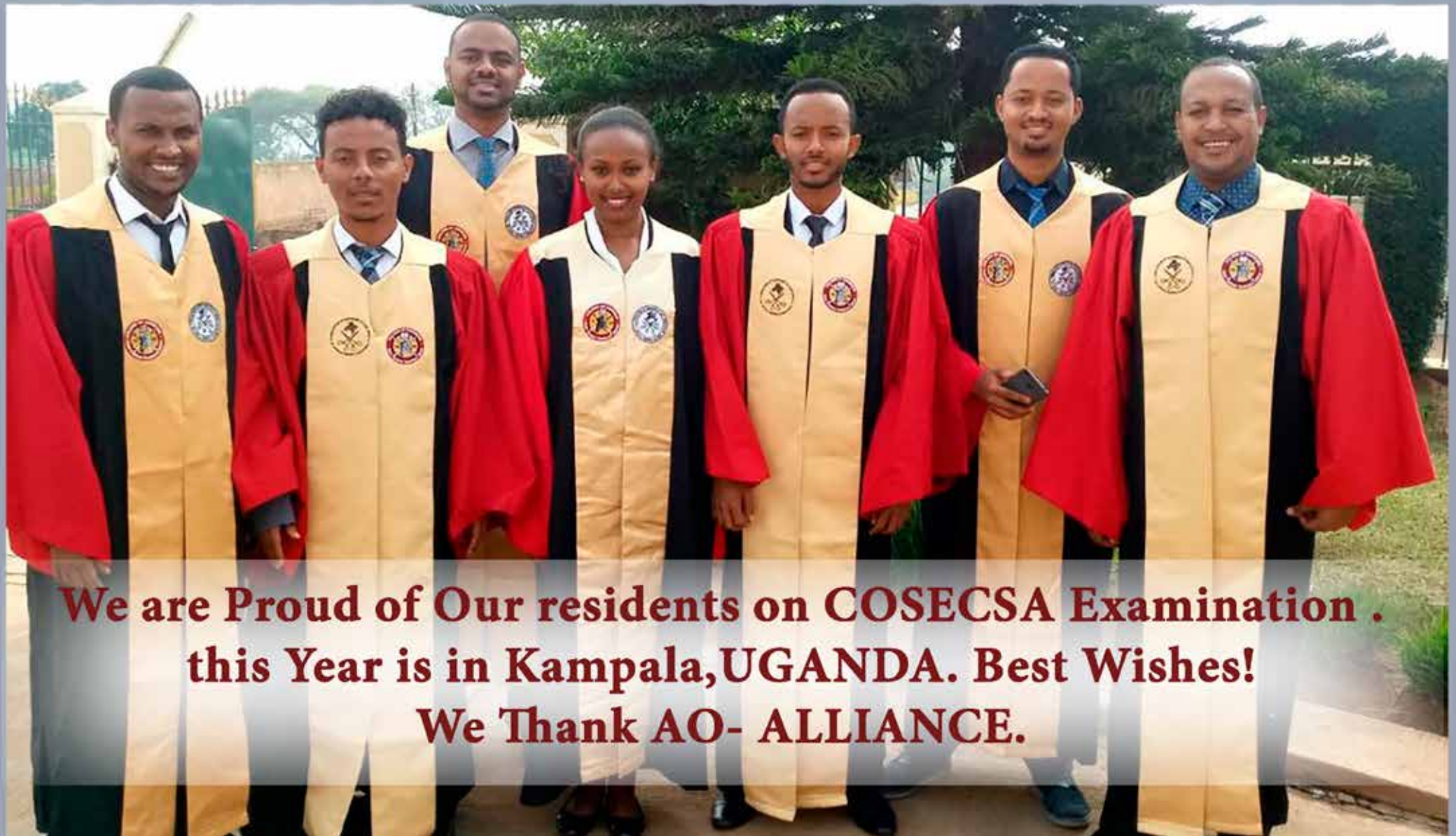
**Conclusions**
All fracture types apart from the anterior wall simple fractures were reported to have a satisfactory functional outcome following surgery and majority have no role limitations at work.
Limitations to the study included a small cohort size and a short follow up.

**Keywords**

Acetabular fixation, patient reported outcome measures

# COSECSA GRADUATION CEREMONY

## DECEMBER 2018,KIGALI, RWANDA



**We are Proud of Our residents on COSECSA Examination .**
**this Year is in Kampala,UGANDA. Best Wishes!**
**We Thank AO- ALLIANCE.**

# ETHIOPIAN INITIATIVE TO MANIFACTURE low-Cost wound VAC: It's High time for the wounded

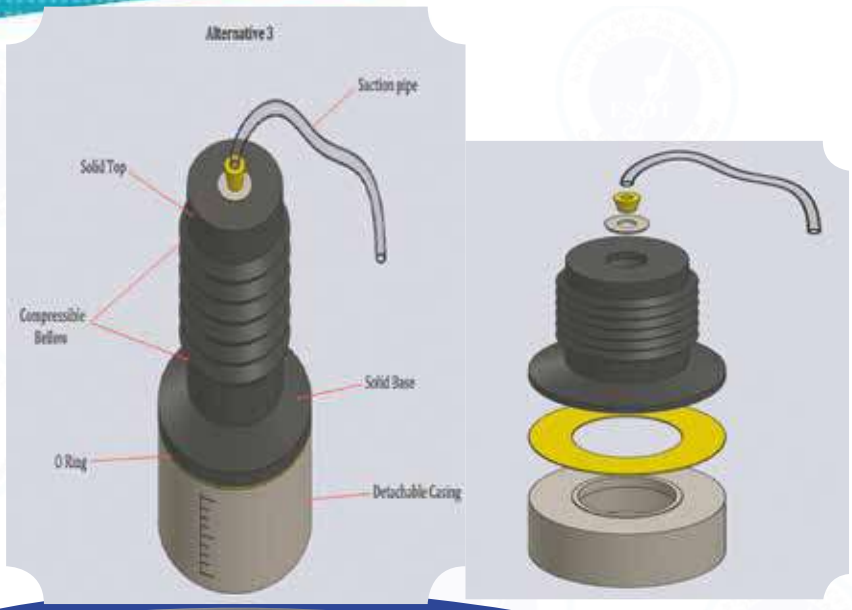
Dr. Bezawit, Er. Biruk and Er. Tsedey, Dr. Loch T, Dr. Woubalem Z.

People have been taking care of the wounded since the history of man kind. It is natural to believe even pre historic humans must have had some way of treating the wounds hunters sustained during the hunting and gathering activities. Our country being one of the nations with so much war history also had many traditional caring methods designed to alleviate pain ,salvage wounded extremities and prevent life threatening complications apart from the civilian patients treated under the expertise of traditional healers. Since the beginning of Modern Hospital care in our country, which started during the 19th century after the opening of the Addis Ababa Russian Hospital in 1897, which was Ethiopia's first Hospital. Our wound care practice has been walking slowly towards modernization.

Negative pressure wound therapy (NPWT) is the application of a controlled vacuum to a wound cavity, it provides proven wound healing benefits and is often a desirable wound treatment. The first Introduction of negative pressure wound therapy (NPWT) was in the early 1990s and has been clinically demonstrated to speed the healing time of open wounds by a factor of two or more and to aid in complete recovery with less scar tissue. Its Non-invasiveness, high efficiency ,ability to shorten time of wound healing has been acknowledged for treating both acute and chronic wounds caused by diabetic ulcers, venous ulcers, pressure ulcers, first and second-degree burns, chronic wounds, and wounds that contain a large amount of drainage.

Current wound care practice in our country incorporates Debridement, Irrigation, wet or wet to dry gauze dressing. This practice lacks the special wound healing features of NPWT such as drawing the wound edges together protection from outside microorganisms, removal of soft tissue exudates, and Increasing cellular proliferation on the wound surface. The high purchasing cost, constant electricity requirement, Complex interfaces, and lack of portability has been posing a problem for many low income countries to acquire such modern wound care gadgets.

From February 23 to 28 2019 advanced wound care team composed of two specialized wound care nurses (Cynthia and Hannah ESOT 2018 cover.jpg) and an Orthopedic Foot and Ankle Sub-specialist, Dr. Loch TRIMINGHAM from Peace Health Wound Care Center, Seattle, USA came to visit our hospital, BLH.
He is a regular visitor for the last 10 years. They provided advanced wound care training to our nurses and donated Wound VAC equipments which kick started the beginning of advanced wound care practice in our Hospital. After the successful completion of their stay, Dr Loch initiated the gathering of a group of two engineers and a medical doctor supervised by the main Orthopaedic Department to start a project that works on the design manufacture and implementation of mechanically driven, non electricity dependent, low-cost NPWT device that meets the standard wound care requirements all the while being affordable, easy to understand, portable and usable for home therapy . The design has been completed and submitted to MiNT who will be the source of the funding for the project including supervising the quality standards. Its our hope to see this project completed and our wound care practice modernized in order to provide the 4.5 million chronic wounds in the third world and a minimum of 2.5% of the wounds which are good candidates for NPWT and the 21,681 per 100,000 fatalities following motor vehicle accidents who come with all kinds of difficult wounds, a world class treatment and substantially decrease the extended hospital stays and associated financial burdens.
We will present the design (Low-Cost model) the team had produced at the ESOT 14th AGM.




working design of mechanical NPWT device.

wound on Wound VAC progress in 9 days, finally easy to graft

ward patients on wound VAC

# Techniques used and outcomes of proximal third extra articular tibial SIGN Nailing

By: Mengistu Gebreyohanes, Sintayehu Bussa, Ephrem Gebrehana
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**Introduction:** Even though the best management of proximal extra-articular tibial shaft fracture is intra medullary nailing, it is one of the difficult fractures to attain and maintain reduction due to valgus and apex anterior deformities secondary to the deforming muscle pull. There are different techniques mentioned to prevent these deformities including nail entry point, use of blocking screws, AO distractor or external fixator use, nailing in semi extension, supra-patellar nail insertion and use of unicortical plating.
In this study we are reporting our experience in managing a cohort of patients with extra articular proximal third tibial shaft fracture managed with SIGN nail focusing on techniques used (specifically external fixator, unicortical plate and blocking screws), complications and short term outcome in the absence of C-arm.

**Objective:** To describe the indications and techniques used to prevent deformities in proximal extra-articular tibial SIGN nailing.

**Method:** It was a descriptive study of patients diagnosed with proximal third tibial shaft fracture and managed with SIGN nail at Hawassa University Hospital for the last 2 and half years. It is mixed type of study (prospective and retrospective) in which data was collected from the patients' chart, operation note, SIGN online database and pre-operative, immediate post- operative and follow up x-rays.

**Result:** A total of 54 patients were treated at Hawassa Referral Hospital with the diagnosis of proximal extra articular tibial fractures. The mean age was 33.61 (15-70) years with a male predominance of 87.7% (47/54). Road traffic accident was by far the leading cause of injury accounting for 86.8 %. Based on the pattern of fracture, 31.48% (17/54 patients) were having segmental fracture, 18. 5% (10/54) was having communition and the remaining 27 patients were with simple fracture pattern. Almost all of the proximal tibial fracture was in the typical valgus and apex anterior deformities. Provisional unicortical plate was used for 26 patients, blocking screw for 8 cases, provisional external fixator for 14 and the remaining 6 patient was operated with the help of Lowman and bone holding forceps.
There were no gross postoperative malalignment deformities. There was one smoker patient who develops wound dehiscence and deep surgical site infections for whom SIGN nail was changed to external fixator. Two patients were having delayed union.

**Conclusion:** Proximal tibial fracture is not uncommon at Hawassa referral Hospital and outcome is good with appropriate techniques used for reduction. Either unicortical plate or blocking screws were effective for simple fracture pattern of proximal tibial nailing and provisional external fixators were effective for comminuted and segmental fractures to maintain length.

**Key terms:** proximal tibia, reduction techniques, Nailing, SIGN

# TITLE: DELAYED PRESENTING CAST RESISTANT CLUBFOOT TRIAL (DPCRCT): A RANDOMISED CONTROLLED TRIAL COMPARING FUNCTIONAL OUTCOMES FOR CAST-RESISTANT CLUBFEET IN OLDER CHILDREN TREATED EITHER WITH TRIPLE ARTHRODESIS OR ILIZAROV SOFT TISSUE DISTRACTION.

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T.Tesfaye RN
M.Etsub Kassahun FCS ECSA (Orth)
T.Tilahun Zerfu FCS ECSA (Orth)
R.O.E.Gardner FRCS (Tr and Orth)
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**Introduction**

For cast resistant delayed presenting clubfeet the treatment options include joint preserving soft tissue distraction and joint sacrificing techniques. We undertook this comparative study to look at functional results of both techniques with the goal to develop a treatment recommendation for our patients when casting is not effective.

Patients and Methods

Patients with 311 delayed presenting idiopathic clubfoot according to Ponseti principles. Those that failed had residity following nine casts. 64 clubfeet were included and were randomization into distraction or triple groups as an experlowing treatment, eartions were recorded. year after removal of The Laaveg & Ponseti score was the prima-PAVER score was used foot deformity. Pedo-of foot pressures, radiand the ability to heel also recorded. Analysis was on an intention to treat basis. National ethical approval was obtained.

(age 3-15) were casted ual midfoot deformallocated by block Ilizarov soft tissue arthrodesis treatment tise-based trial. Folly surgical interven-Follow-up was one cast for final surgery. functional outcome ry outcome measure. to assess residual fixed barographic indices ological parameters, and toe walk were

**Results**

Follow-up was 88% at one year. The joint sacrificing triple arthrodesis group had a significantly greater PAVER score for residual rigid deformity which resulted in higher rates of early revision surgeries in this group (9 vs 1 revision for triple and Ilizarov groups respectively, X2 p=0.01). Revision surgeries were for residual equinus, non-union and residual supination/varus deformities. One Triple arthrodesis patient had minor wound break-down, one tibialis anterior tendon was non-functional in the Ilizarov group. There were no serious adverse events. The Laaveg & Ponseti outcome measure was significantly better in the Ilizarov group (Mann-Whitney U 2-sided p<0.01) but some patients experienced mild pain around the subtalar joint. Sub-group analysis revealed a tendency for pain symptoms in the mature feet managed with soft tissue distraction.

**Conclusions**

The joint sparing Ilizarov approach produces a better outcome in terms of function at 1 year and more reliable correction with fewer further surgical episodes needed. Although a more complex treatment, this study supports the more widespread use of this method in pre-mature severe, untreated clubfoot that is resistant to casting.

# REVISITING THE GIRDLESTONE/SCHANZ PROCEDURE AS A STAGED RECONSTRUCTION FOR THE PAINFUL, ADDUCTED POST-SEPSIS STIFF HIP IN ADOLESCENCE; A SINGLE SURGEON'S SERIES.

Authors
1. Temesgen Zelalem MD MCS
2. Tsion Tesfaye RN MSc
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## Introduction

The Ilizarov Hip reconstruction is indicated post hip sepsis and has many desirable goals including restoration of the abductor lever mechanics of the hip, restoration of the limb mechanical axis and the lengthening of the limb. The complication rate is very high and unacceptable rates of knee stiffness and prolonged time in a femoral external fixator is expected. Newer paradigms of treatment are focusing on performing the proximal osteotomy with internal fixation and lengthening using a motorized nail. We have been performing the Pelvic Support Osteotomy using a Girdlestones resection followed by skeletal traction then a proximal Schanz osteotomy. We were interested to review outcomes after a minimum of 1 year following surgery.

## Methods

8 patients who had hip sepsis and a stiff painful adducted hip, meaning that they could not walk unaided underwent a Girdlestones resection arthroplasty followed by a proximal Schanz osteotomy. All patients were skeletally mature and had no signs of prior proximal femoral diaphyseal osteomyelitis. The osteotomies were fixed using a large fragment DCP and small fragment recon plate in a 90/90 fashion. Weight bearing was commenced gradually after 6-weeks with abductor muscle exercises. All patients were reviewed after 1 year or more following the procedure with Harris Hip score and X-rays.

## Results

Average follow-up period was 2.2 years. All patients had a hip and knee that allowed deep knee flexion and squatting. All osteotomies healed, one was delayed and took 5 months to heal. One patient had removal of the large fragment plate due to a screw that was impinging, being too long. The average limb length discrepancy as measured on blocks was 4.75cm (range 3cm-7.5). 2 patients had received a long leg epiphysiodesis before maturity. Harris Hip scores averaged 87/100 (range 75-97). Many returned to school and some returned to work in the fields. It was noted that it took well over 1 year for the hip function to optimize, particularly active hip flexion and adequate abductor power. Of the 8 patients, 5 had mild trendellenberg when assessed clincically. Two had mild pain localized to the abductor muscle. No patient underwent subsequent femoral lengthening and all were managed with a substantial shoe raise. No patient was using a walking aid.

Conclusions

The Girdlestone-Schanz procedure is technically demanding but successful. With careful case selection a reliable outcome can be predicted with minimal complications. It may have a significant role in the management of the post-septic painful stiff hip. Pre-mature long leg epiphysiodesis would be helpful in reducing limb length inequality.

# Mobile Use and MSK Diseases / Syndrome An alert to every one!

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In collaboration with,Dr. Biruk Lambisso (Associate Professor)
Head, Department of Orthopaedics and Traumatology
July 2019 G.C.

Smart phones have been in use since the early 90's. Currently, they are an integral part of modern telecommunications in most individual's life. Globally, the use of these gadgets has increased dramatically in the past ten years with an estimated 4.8 billion users today.

Meanwhile, there is also a rapid increment of cell phone use in developing countries like Ethiopia, where there are more than six million active subscribers. Adolescents and young adults tend to dominate with regard to the cell phone use, due to the rapid expansion of social media consumption.

As a result, we continued to witness and describe new patterns of medical conditions directly or indirectly associated with use of these mobile phones. Usage of mobile phones while driving has a 3-4 times increased risk of road traffic accident.

Besides, there is probable increased risk for sleep disturbance, stress, and brain tumors due to radiofrequency emission. However, musculoskeletal problems of the neck, back and upper limbs predominate, particularly in young adults.

Evidences show that increased use of mobile phone for texting is associated with problems with the neck, upper back, shoulder, forearm and hand. This is related to the physical exposure when texting on a mobile phone; where there is low physical load, repetitive thumb movements and neck flexion. This leads to forearm and thumb tendonitis, tenosynovitis and first carpometacarpal arthritis, in relation to excessive phone texting.

There is a specific posture, style and muscle activity while texting which potentially leads to neck and upper back problems. This is related to the ergonomic problem when using mobile phone for texting, in that keys and screen are in the same plane. Hence to reach a comfortable posture for the arms, phones will be held in front of the belly, leading to compensatory neck and upper back flexion to read the screen.

A recently published study has found that, the head flexion angle to be larger with texting than web browsing and video watching. Sitting with the head bent forward without supporting the arms, causes constant static load to the neck and shoulder muscles, which causes neck/upper back pain. In one study, a degree of >20 degree neck flexion for >40% of the working day is strongly associated with neck /upper back pain necessitating sick leave from work.

Another recently published longitudinal study revealed that, there is a cross-sectional and prospective association between immense phone texting and the occurrence of neck/upper back and shoulder pain, and numbness and tingling in the hand/fingers after a minimum of one year of follow-up. This occurred as low as 10 texts per day, but, strongest association was found with more than 20 texts a day.

There are also case reports of chronic hypothenar eminence pain caused by smartphone use with the hands resting on a table, which is one diagnostic challenge in young adults with chronic hand pain. This posture leads to chronic hypothenar muscle inflammation and pain, affecting quality of life and hand function.

Hence, the currently booming smart phone use has medical and public health implications, seeking all kinds of attention in terms of ergonomics, policy makers and health professionals. The public should be aware of the health risks of spending much time texting with an inappropriate technique, necessitating health information dissemination through various occupational and non-occupational media outlets.

An Ortho paedic Surgeon Practicing in this era should consider these conditions in the diffrencial diagnosis.

# Hip Ultrasound in Developmental Hip Dysplasia- Is There a Need for Early Screening Strategy? An Initial experience at a Tertiary Specialized Teaching Hospital in Addis Ababa, Ethiopia

Dr.Daniel Z

**Background:** Developmental dysplasia of the hip (DDH) does not have an established etiology. This congenital anomaly encompasses a wide spectrum of conditions from mild, clinically insignificant acetabular dysplasia in the adult to irreducible, total dislocation of the hip in neonates. Clinical assessment of DDH is not always as effective and efficient as assumed previously, and the role of ultrasound imaging has increased over the years and is now extensively employed for screening of neonates. The local literature does not have any information regarding incidence in Ethiopia apart from sporadic clinical encounters in routine practice. The purpose of this article is to do a preliminary ultrasound assessment of the status of late DDH in infants between the ages of 4 weeks and 6 months.

**Methods:** A cross-sectional prospective study conducted in 65 neonates in the pediatric unit of the Department of Radiology at Tikur Anbessa Specialized Teaching Hospital from August 2018- to February 2019. Hip ultrasound exam was performed. The Graf method of static scan was employed to measure the alpha and beta angles of both hips and angle measurements were grouped according to the Graf angle classification. Subjects were stratified by gender and age Mean values of alpha and beta angles of both hip sides as well as hip types were analyzed using the Graf classification. The data collected were correlated with independent sample T test.

**Result:** From a total of 65 babies in the study, 40(61.5%) were males and 25 (38.5%) females. In the female babies, the mean alpha angles were 63.08 +/-4.30 degrees for the right hip and 64.20+/-5.45 for the left; whereas the mean beta angles were 44.4 +/-10.7 for the right hip and 45.36+/-11.0 for the left. In the male babies, the mean alpha angles were 64.65+/-4.35 for the right hip and 63.63+/- 7.16 for the left; while the mean beta angles were47.05+/- 14 for the right hip and 47.12+/- 11.65 for the left. Type II (immature and dysplastic) hips comprised 4.61% for the right hip and 10.7% for the left in males and 4.61% each for both hips in females (16/24.6% of the total).Graf type IV (dislocated) hip comprised 4.61% for the right hip and 1.5% for the left in males (4(6.1%) of the total) and was not identified in females.

**Conclusion:** The proportion of hips identified in the study warrants the need for a much larger and more comprehensive study of DDH and associated compounding factors and the role of ultrasound should be considered in the approach to a wider clinical application or a potential screening strategy.

# Assessment of Impact of AO Non-Operative fracture management training for Medical Interns at Hawassa University Referral Hospital (ongoing study)

By: Mengistu Gebreyohanes, Ephrem Gebrehana, Sintayehu Bussa
Correspondence to: Mengistu G/Yohanes, Email:mengistuGy@gmail.com

**Introduction:** Medical Internship is an important part of academic curriculum to acquire relevant knowledge, practical experience, soft skill and package of a good attitude. In order to improve skill and practice for medical Interns, giving some refreshment training on specific area has a great Impact. The main reason why this two days AO non-operative fracture management training is being given for interns is due to the fact that they are the first personnel to encounter trauma patient at emergency department and give basic aid. They are also believed as the ideal person to be trained with this course since they will face many orthopedic patients in their future career.

**Objective:** To asses impact of giving AO non-operative fracture management training for Medical Interns in terms of knowledge, attitude and skill.

**Method:** self-administered pre- and post-test questionnaires were prepared and administered before and after the training. The question consists of sociodemographic variable, multiple choices questions to assess knowledge domain, 5 point likert scale to assess attitude aspect and Yes/No questions to assess their practice.

**Result:** A total of 72 medical Interns who were involved in two subsequent training were completed the pre- and post-test questions. The average age of respondent was 24.25 (22 – 28) years with 79.2% (57/72) of respondents being Male. Average pre-test knowledge score was 5.58 (3- 8) with the maximum correct answer given for Polytrauma patient approach and open fracture management (95.7%). The average post- test knowledge score was 8.9 (6- 9) with significant p-value of 0.002. Their attitude towards the training was good to excellent in 97.2% (70/72). The average practice score among medical interns was good with lowest practice reported for pelvic binder and coaptation splint application.

**Conclusion and recommendation:** This ongoing study shows that giving AO non-operative fracture management training for medical interns is effective in boosting their knowledge, attitude toward non-operative fracture management and practice.

We recommend that medical Interns throughout the country should get this AO non-operative fracture management training.

**Key terms:** Non-operative, fracture management, Medical Intern, Training

# Fibrodysplasia Ossificans Progressiva

Written by: Dr. Rick Hodes/Dr. Fre Alemseged
June, 2019

**History**

Medical reports describing individuals affected by FOP date back as far as the seventeenth century. FOP was originally called myositis ossificans progressiva and was thought to be caused by muscular inflammation (myositis) that caused bone formation. The disease was renamed by Victor A. McKusick in 1970 following the discovery that soft tissue other than muscles (e.g. ligaments) were also affected by the disease process. The best known FOP case is that of Harry Eastlack (1933–1973). His condition began to develop at the age of ten, and by the time of his death from pneumonia in November 1973, six days before his 40th birthday, his body had completely ossified, leaving him able to move only his lips. Eastlack only lived to meet one other person with his same disease.

Eastlack donated his body to science. His skeleton is now at the Mütter Museum in Philadelphia, and has proven to be an invaluable source of information in the study of FOP. Another FOP sufferer, Carol Orzel (c.1960-2018), also donated her body to the museum and her skeleton was placed on exhibit there, adjacent to Eastlack's, in February 2019.

Description: Fibrodysplasia ossificans progressiva (FOP) is a disorder in which muscle tissue and connective tissue such as tendons and ligaments are gradually replaced by bone (ossified), forming bone outside the skeleton (extra-skeletal or heterotopic bone) that constrains movement. This process generally becomes noticeable in early childhood, starting with the neck and shoulders and proceeding down the body and into the limbs.

Extra-skeletal bone formation causes progressive loss of mobility as the joints become affected. Inability to fully open the mouth may cause difficulty in speaking and eating. Over time, people with this disorder may experience malnutrition due to their eating problems. They may also have breathing difficulties as a result of extra bone formation around the rib cage that restricts expansion of the lungs.

Any trauma to the muscles of an individual with fibrodysplasia ossificans progressiva, such as a fall or invasive medical procedures, may trigger episodes of muscle swelling and inflammation (myositis) followed by more rapid ossification in the injured area. Flare-ups may also be caused by viral illnesses such as influenza.

**Frequency:** Fibrodysplasia ossificans progressiva is a very rare disorder, believed to occur in approximately 1 in 2 million people worldwide. Several hundred cases have been reported.

Clinical presentation: Hallux valgus, Metaphyseal widening, Short 1st metacarpal, Short hallux, Abnormality of the ear, Conductive hearing impairment, Sensorineural hearing loss, Abnormality of the integument, Alopecia

Abnormality of the nervous system: Intellectual disability, Abnormality of the respiratory system, Respiratory failure

Abnormality of the skeletal system: Abnormality of the first metatarsal bone, Broad femoral neck, Clinodactyly of the 5th finger, Ectopic ossification in ligament, muscle and tendon tissue, Short Hallux valgus, Metaphyseal widening, Progressive cervical vertebral spine fusion, Short 1st metacarpal, Small cervical vertebral bodies.

**Genetics:** The ACVR1 gene provides instructions for producing a member of a protein family called bone morphogenetic protein (BMP) type I receptors. The ACVR1 protein is found in many tissues of the body including skeletal muscle and cartilage. It helps to control the growth and development of the bones and muscles, including the gradual replacement of cartilage by bone (ossification) that occurs in normal skeletal maturation from birth to young adulthood

Radiographic features: FOP can be evaluated using plain radiographs, CT and/or MRI. MRI is mostly useful for subtler edema which would not be seen on the other modalities. Characteristic features include: hallux valgus, monophalangic first toe, shortened metacarpals, pseudoexostoses (ossification of ligamentous insertions), microdactyly of the first metacarpal/metatarsal, neck muscle edema, C2-C7 facet joint fusion

Massive heterotopic ossification along the distal portion of the psoas muslce (from left lateral aspects of L3 and L4 vertebrae) down to the adjoining iliacus (where its shows fusion with the left iliac bone) and then along the course of the iliopsoas muscle down to its insertion at the femoral lesser trochanter (with trochanteric fusion also).

This topic's discussion here is relevant because of a 20 years old male Ethiopian who is diagnosed with this rare illness.

**References:**

https://ghr.nlm.nih.gov/condition/fibrodysplasia-ossificans-progressiva#
https://radiopaedia.org/cases/fibrodysplasia-ossificans-progressiva
https://en.wikipedia.org/wiki/Fibrodysplasia_ossificans_progressiva

**Brief clinical summary**

A 20 years old male who first presented 7 years ago with back deformity and inability to move his upper extremities with gradual stiffness involving the shoulder girdle. He also had totally stiff spine and hips. Through the years the back deformity got worse with further limitation of motion.

Currently he has fused temporomandibular joint with closed jaw.

Physical exam

Locked jaw

Limited neck motion, no motion of shoulder joints with atrophied shoulder girdle muscles

Kyphoscoliosis with hard irregular bony hard prominences over the trunk extending to the pelvic girdle.

Fixed flexion deformity of the hip.

Shortened big toe with hallux valgus bilaterally.

# Squamous Cell Carcinoma resulting from Chronic Osteomyelitis of Humerus: A Case Report

Eyueal.A, Eskinder.K

## Introduction:

Malignant transformation because of chronic osteomyelitis represents a relatively rare and late complication which mainly occurs at the level of the edges of a sinus tract with extension and infiltration to the surrounding soft tissues and more rarely to bones. For most patients, the interval between the occurrence of the original bacterial infection and the transformation to malignant degeneration is several years. The diagnosis of malignant transformation in a chronic discharging sinus requires a high index of clinical suspicion.

Wound biopsies should be obtained early, especially with the onset of new clinical signs such as increased pain, a foul smell, and changes in wound drainage. Squamous cell carcinoma is the most common type of malignant tumor deriving from chronic osteomyelitis. The most frequently affected site is the tibia, followed by the femur. The upper limb is rarely affected.

Definitive treatment is amputation proximal to the tumor or wide local excision, combined with adjuvant chemotherapy and radiation therapy in selected patients.

**Case Report:**

A 47 years old male farmer presented with left arm swelling & pain of 3 months duration.

PMH: -he had history of fall & trauma to his left arm as a childhood and was treated with traditional bone setters at the time and since then had recurrent history of discharge from the left arm for more than 27years as the patient claims. He had falling down accident 3months prior to his presentation and went to local hospital and operation (sequestrectomy) was done twice; the pain, discharge and swelling was increasing since then. He has no other history of comorbidity. He stopped his farming activity recently because of the constant disabling pain as the patient claims.

P/E: -at presentation he has gross swelling of the Lt arm up to the level of mid-forearm, has 3x4cm wound with foul smelling discharge (pus mixed with blood) over Antero-lateral aspect of mid-shaft of the arm. Has tenderness over the arm and elbow joint is stiff with about 150 of flexion/extension movement. Distal NV are intact.

**Investigations:** - CBC (Normal Parameters), ESR(45mmhr), CRP (192), X-ray & MRI of Lt Arm was done (Impression: - left humerus destructive bone lesion associated with large soft tissue mass likely metastasis. The DDX may include fibrosarcoma)

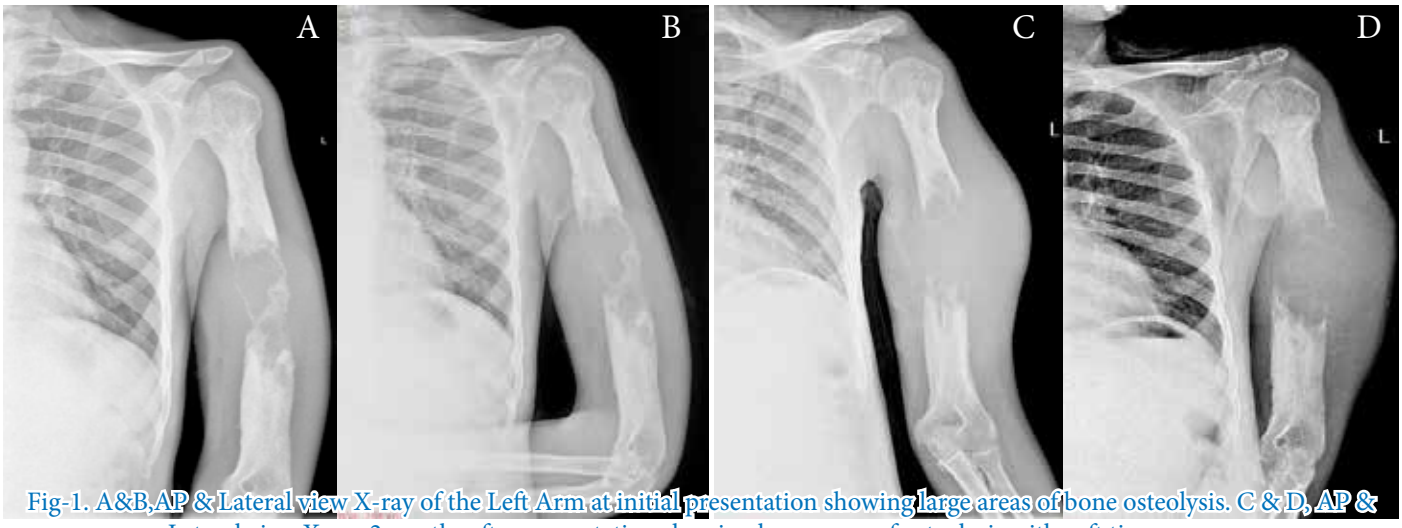



Fig-1. A&B,AP & Lateral view X-ray of the Left Arm at initial presentation showing large areas of bone osteolysis. C & D, AP & Lateral view X-ray 2months after presentation showing larger area of osteolysis with soft tissue mass.

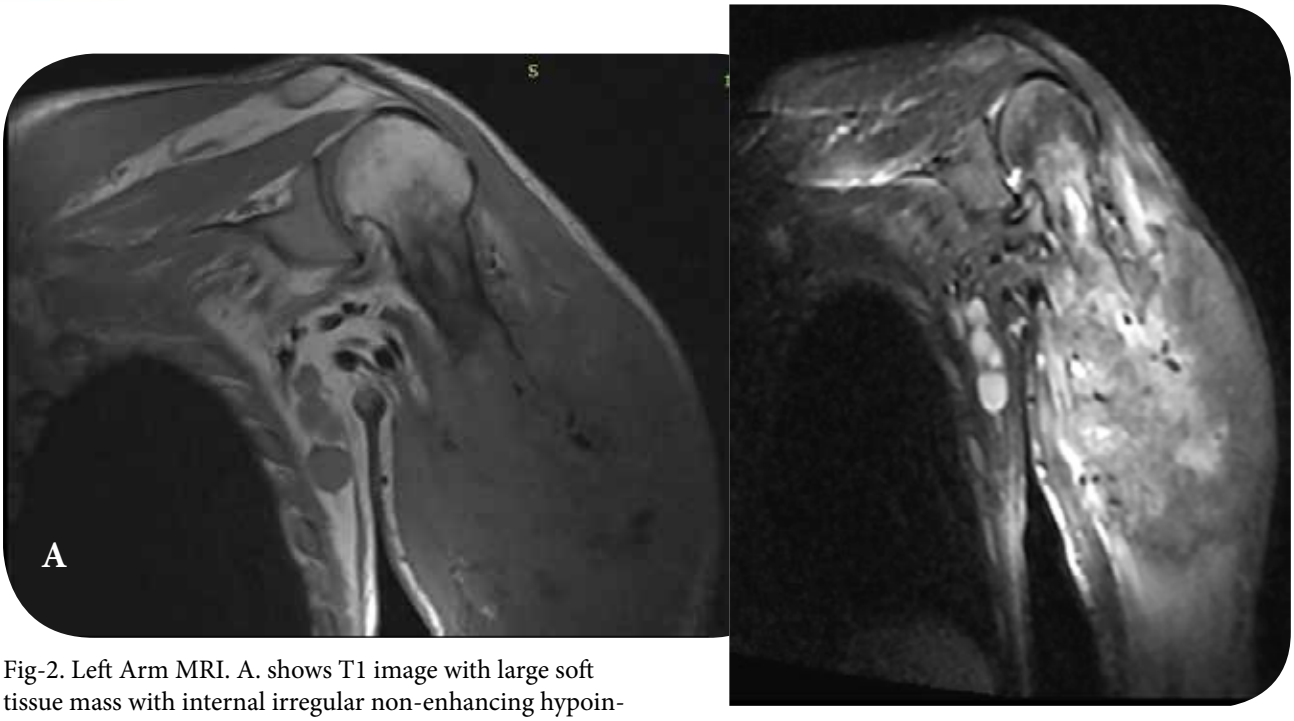



Fig-2. Left Arm MRI. A. shows T1 image with large soft tissue mass with internal irregular non-enhancing hypointense component. B. shows T2 image with heterogenous signal intensity & multiple left axillary lymphadenopathies.

**Initial Diagnosis:** - Left Humerus Chronic Osteomyelitis with Pathologic Fracture

Treatment: - was admitted to orthopedics ward 2 months after he was seen at orthopedic referral clinic because of lack of bed & planned operation was incision & debridement plus Biopsy.

Intraoperatively all the tissues were granulating and fragile with about 8cm of bone gap filled with organized pus mixed with fragile tissue. A piece of sequestered bone was also removed. Samples were sent for G-stain, Culture/sensitivity & tissue Biopsy for histopathological examination. Patient was placed on long arm posterior splint as the bone was weak to apply an external fixator.

**Results:** - G-stain showed Gram positive cocci (Stahphylococcus Aureus) with many puss cells which were sensitive for the antibiotics Erythromycin, Clindamycin &Cloxacilin. And the patient was placed on IV antibiotics according to the sensitivity result till biopsy result arrives.

Histopathology exam showed fragments of tissue composed of nests of malignant squamous cells invading into the stroma with intense fibrinopurulent inflammation and keratin pearl formation. Diagnosis was Left Arm Keratinizing squamous cell carcinoma.

Second surgery (Left Shoulder Disarticulation) was done 4 weeks after the first surgery after informed consent was taken. Intraoperatively there were multiple left axillary lymphadenopathies and lymph node dissection was also done.

Patient was discharged from ward after the wound was checked and linked with oncology department for possible adjuvant treatment and follow up.

Six weeks post-op patient was seen at follow-up clinic and the wound has healed uneventfully.

**Conclusion:** -Carcinomatous degeneration after chronic osteomyelitis is a rare and late complication. It should be considered even years after the development of chronic osteomyelitis. The most suggestive signs are the persistence of a foul-smelling fistula and the appearance of a painful swelling or a pathological fracture. Biopsy is a must for diagnosis. Treatment depends on the stage of the disease: in the early stage, limb saving surgery can be performed, but in the advanced stages with bone invasion and large skin defects, amputation is necessary.

# Physician Burnout
## What is burnout?

First described in the 1970s, Burnout is a work-related symptoms of Exhaustion, Depersonalization and Doubt that you FAIL to recover from and occurs in individuals without any prior history of psychological or psychiatric disorders.

When your career is fulfilling and satisfying with feeling of making positive difference in people's lives and has true purpose; We call it ENGAGEMENT ;the emotional gold standard for career success. When you are at the opposite end of the continuum it is called Burnout.

Is Burnout same with stress? NOPE. Stress is a situation in which negative energy is invested now in regards of perceived thoughts about the future. It is neither bad nor good. The "most stressful" professions are characterized as having a high level of responsibility and little control over the outcome. Hence being a doctor is stressful, period! The difference between the two is the ability to recover.

- Stress is when you are drained and still able to recover
- Physician Burnout begins when you are drained and NOT able to recover or recharge your energy between your time off

How common is Physician Burnout?

Medical School; 50% of medical students experience burnout and 10% experience suicidal ideation

Residency; 27-75% of residents are burned out at any given time, depending on specialty Practicing physicians; Medscape 2019 report; 44% burned out, 4 % clinically depressed. The most burned out physicians are Urology (54%), Neurology (53%), physical medicine &rehabilitation (52%), In this report Orthopaedics is at 20th with 38 % burn out rate. Long working hours is directly correlated with high physician burnout, because of lack of sleep. Long hour working physicians are surgery (77%),urology(76%),cardiology(72%),orthopaedics is in the top 10 with 62% long working hours.

Are male or female physicians burned out more? Women (50%), Men (39%)

How common is physician suicide?

Doctors: 28-40/100,000; General population :12.3/100,000

Male doctors commit suicide at a rate of 70% higher than other professionals

Female doctors commit suicide at a rate of 250-400% higher than other professionals

What is the pathophysiology of Physician burnout?

Let's begin by acknowledging that Being a Doctor is Stressful; why?

- Because this is one of the few jobs with lots of responsibility and little control, it saps our energy every single day
- Because we work with sick people all day long and Our days are filled with intense encounters with sick, scared or hurting people … with all the emotional needs that come with an illness.
- Because we are also drained by dozens of additional stressors that have nothing to do with our clinical activities.
- Because we missed the Balance, What Balance?

Medicine has a powerful tendency to become the "career that ate my brain", pushing all other life priorities to the side. Our training reinforces our innate workaholic tendencies. As we get older, with more family responsibilities, the tension between work and our larger life is a major stressor for many. Lack of training in how to create and maintain boundaries – this time between work and life – is a part of this perfect recipe for physician burnout.

- Because you play a Leadership Role you are Not Trained For

You graduate into the position as leader of a healthcare delivery team without receiving any formal leadership skills training. By default we learn a dysfunctional "Top Down" leadership style. Medicine and the military are the only professions where the leaders "give orders". This adds additional stress. (burnout's smile just got a little bigger)

- Because we are the Rate Limiting Step in the System

We are the "bottleneck" in the provision of services on this same healthcare team,. The team can only go as fast as we can – and we are often behind schedule. Pressure mounts to perform at full steam all day long. This non-stop pressure is a key factor in physician burnout once you are in practice.

- Because the Closed Door Creates a Black Box

We are isolated from the rest of the patient care team by the exam room door. We don't know what they are doing and they don't understand our situation simply because the majority of care occurs behind that closed door – when we are one-on-one with our patients.

- Because some of us are not paid well, our life is hand to mouth! And that sucks!

The financial incentives are confusing at best. The patient is often not the paying for our services and many of them receive their care with no personal investment on their part. Because we are not paid well, our life is hand to mouth. We cannot take care of our significant others; we can't get proper treatment if we get sick.

- Because A Lawsuit is Waiting to Happen

The hostile legal environment causes many us to see each patient as a potential lawsuit. This fear factor adds to the stress of all the points above.

- Because the Job Isn't Over Until the Paperwork is Done, documentation requirements are a constant work overload
- Because we are medically brainwashed to be

Workaholic; When your only response to a challenge or "problem" in your practice is to work harder — that is your workaholic programming.

Superhero; When you feel like every challenge for your patients, your staff, your family and yourself sits on your shoulders and you "should" be able to solve them all — that is your Superhero programming.

Perfectionist; When you constantly agonize over miniscule details and demand everything be perfect - and expect the same from everyone else - that is your Perfectionist programming

Lone Ranger ; When you micromanage, can't let things go and drive you and everyone around you crazy by having to do everything yourself — that is just your Lone Ranger programming

How deeply are we brainwashed?

Basic training in the military is 8 weeks. In that time they can condition an 18 year old to take a bullet on command. Medical education is a minimum of 6 years. (How long did it take you from your first day in medical school to your first day in private practice?) There is no more thorough conditioning program on the planet than becoming a doctor.

If your only tool is a hammer, everything looks like a nail

– And that is the problem. Not everything in a doctor's world is a nail … especially after you graduate to private practice and the rest of your life. Physician burnout results when these four become "overused strengths".

Being a workaholic superhero perfectionist lone ranger is an absolute requirement to make it through a 36 hour shift in your residency; BUT it is NOT a great way to be in a loving relationship, Raise your kids, Get your own needs met, Or live your life

According to the Medscape's 2019 burnout report the most contributors to burnout are Burecratic tasks and paper work(59%),long working hours(34%),increasing computerization of practice(32%),lack of respect(30%),insufficient compensation(29%),lack of control(23%)

Physician burnout ensues when the normal stresses of being a doctor — cross the line into threatening your career, your marriage and even your life.

NOTE: symptoms of physician burnout are measured by a standardized research survey tool called the Maslach Burnout Inventory (MBI). They are mainly three CORE symptoms.

1)Exhaustion: Is generalized fatigue that can be related to devoting excessive time and effort to task or project that is not perceived to be beneficial . This is the most common symptom of burnout by far. When burnout prevalence surveys identify the percentage of physicians suffering from "at least one symptom of burnout" - this is the most common burnout symptom.

2) Depersonalization: is a distant or indifferent attitude towards work.

The development of a negative, callous and cynical attitude toward patients and their concerns.

3)DOUBT:

The tendency to see your work negatively, without value and see ourselves as incompetent.

The key to understanding the pathophysiology of physician burnout is to recognize that each of these scales on the Maslach Burnout Inventory correspond to their own Metaphor of "Energetic Bank Account" within the individual physician. An engaged ,happy ,satisfied MD has a positive balance Energetic bank account Physically ,emotionally and spiritually. What about in burnout? The energy balance is negative! The thing is despite the negative balance You can overdraw your energetic bank accounts and continue to see patients. Your work will not be the very best you can do AND you will keep at it.

1) Exhaustion = your Physical Bank Account

2) Sarcasm, Cynicism, Blaming = your Emotional Bank Account

3) "What's the use?" = your Spiritual Bank Account.

Each time you are in the clinic or hospital you expend physical, emotional and spiritual energy as you see patient.

Who pays the price in this Burnout fight? Unfortunately, EVERYONE

Physician burnout has been shown to

- Decrease physician's professionalism and the quality of medical care they provide
- Increase medical errors and malpractice rates
- Lower patient compliance and satisfaction with medical care
- Increase rates of physician substance abuse, suicide and intent to leave practice

The whole purpose of understanding this 3 symptoms of burnout using the 3 energetic bank account metaphor is to help us recharge our account to positive balance.

Now ask yourself What YOUR BALANCE is?

PHYSICAL – how is your energy? Are you in a positive balance?

EMOTIONAL – how are you feeling emotionally? Are you getting your needs met with regards to your most important relationships?

SPIRITUAL – how connected are you to feeling like your work makes a difference and is a meaningful path for you?

I hope your energetic bank account balance is positive in all three dimensions! And I hope it continues that way!

If not and your account is negative, What can be done to recharge?

Is physician burnout an inevitable consequence of the choice to become a doctor … immutable, like gravity? Not by any means. Recent research shows the efficacy of specific burnout prevention and treatment measures on both the personal and organizational level .

The 2 Core Methods at 2 levels to both treat and prevent burnout

1) Decrease the Drain

2) Become Skilled at Making Deposits

Both of these measures are contributed at both levels.

Personal Burnout Prevention Measures

- Deposit by
- Self awareness and mindfulness training
- Pay attention to diet and exercise, Get adequate sleep
- Appreciative Inquiry;( Talk to your appreciative patients)that is called Treasure hunt,hunt for spiritual deposit
- Work Life Balance and healthy boundaries between work and non-work life areas, say NO

'' NO" is a complete sentence .It doesnot require justification or explanation.

- Lowering stress by
- Learning effective leadership skills
- Exerting control where possible over your work hours (women physicians are leading the way here
- Creating focus where possible on work activities that provide the most meaning
- Reduce exposure of stressful activities

Organizational Prevention Measure. Any decrease in physician burnout should produce measurable increases in quality of care and patient satisfaction in addition to lower malpractice rates and physician and staff turnover.

- State an organizational intention to value, track and support Physician Wellbeing
- Institute regular monitoring for physician burnout amongst providers (MBI)
- Create CME programs teaching the Personal Burnout Measures above
- Provide time and funding for physician support meetings
- Provide leadership skills training

- Support flexibility in work hours
- Create specific programs to support physicians suffering from symptomatic burnout
- Provide adequate compensation for the job they do

Burnout is waging a constant, invisible, soul eroding battle with our healthcare providers. According to the 2019 Medscape report 48% physicians cope with exercise,43 % physicians talk to family member and close friends :Both of these are positive coping skills, Maladaptive practices are also 41 % isolate themselves,39% sleep,33% play music,32 % eat junk food; those who drink alcohol are 23% and cigarettes smokers are 3%

- "Victory in this Burnout Battle would make everyone a winner"
- The Physician
- Their Patients
- Their Family
- Their Staff and wider organizatio
- Even the Payor

Last but not least, No matter how far you have gone on a wrong road, turn back.
~ Turkish proverb
If medicine sucks the juice out of you change it, you are not a tree.

Silamlak Sisay MD (OSR4)

Source ;Medscape National Physician Burnout, Depression & Suicide Report 2019 and The Happy MD by Dike Drummond MD

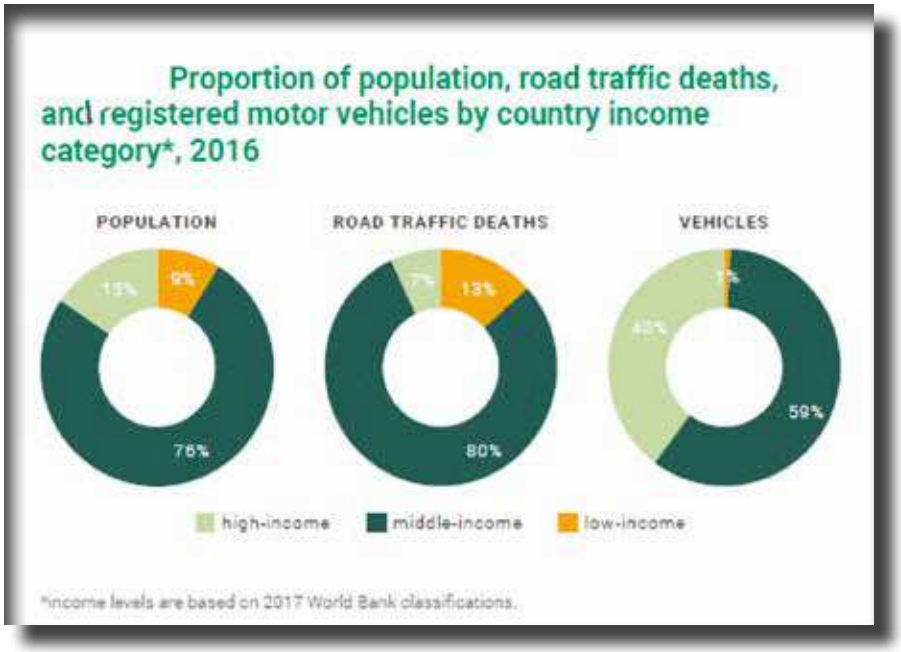
# THE BURDEN OF ROAD TRAFFIC INJURY IN ETHIOPIA

Dr. Mariamawit Baye & Dr. Biruk Lambisso

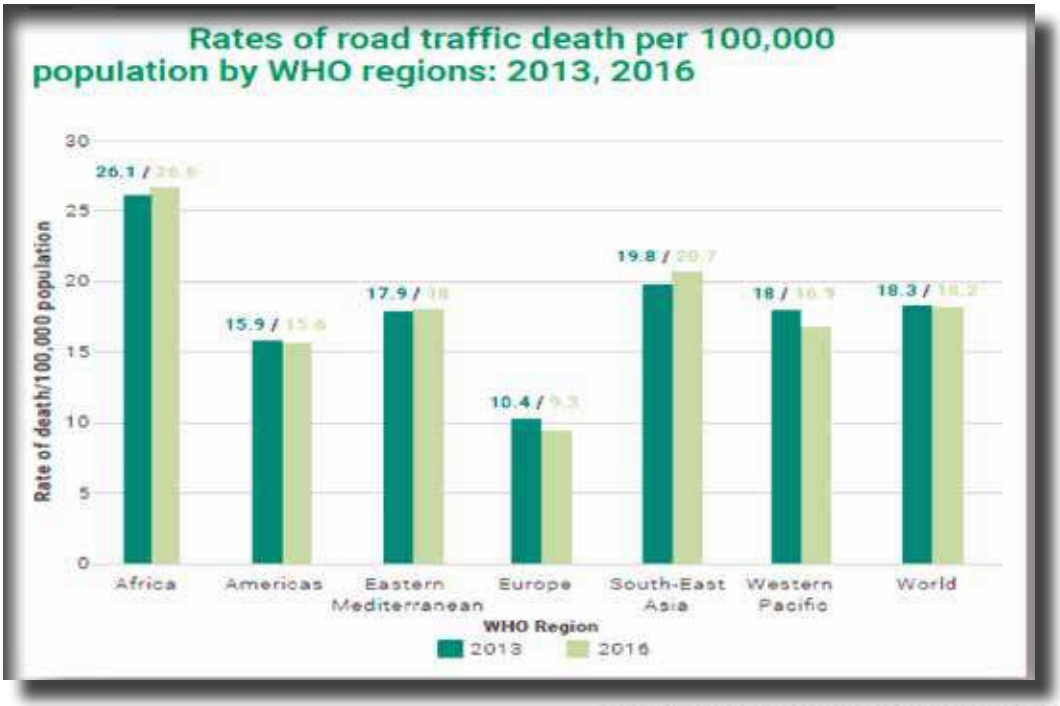
Road Traffic injury (RTI) is defined as an event that occurs on a way or street open to public traffic, resulting in one or more persons being injured or killed, and involving at least one moving vehicle (WHO, 2009).

Our world is witnessing serious fatal injuries in recent years. Road traffic injury take the highest share of these global public health problem. The World Health Organization (WHO) puts the number of fatalities and injuries due to road traffic injuries as 1.35 million and 20-50 million respectively. Researches indicate that these amounts will increase by about 65% and predicted to be the third leading contributor to the global burden of disease and injury over the next 20 years unless there is new commitment to prevention. It is number one cause of death in those aged 15- 29 years and ¾ of them are men.

About 90% of the deaths occur in low and middle-income countries and yet these countries have less than half share of the world's registered vehicles.




In Africa, the number of road traffic injuries (RTI) and deaths has increased over the last three decades. In 2018, African Region had the highest rate of fatalities from road traffic injuries, 26.6 deaths per 100,000 population (global road traffic fatality rate is 18.2 per 100,000 population, middle-income countries annual road traffic fatality rates of 20.1 per 100,000. In African countries deaths from road traffic injuries are 40% higher than in all other low and middle income countries and 50% higher than the world average. In 2013 WHO estimated that, on yearly basis 25.3 road accident fatalities per 100,000 populations occur in Ethiopia



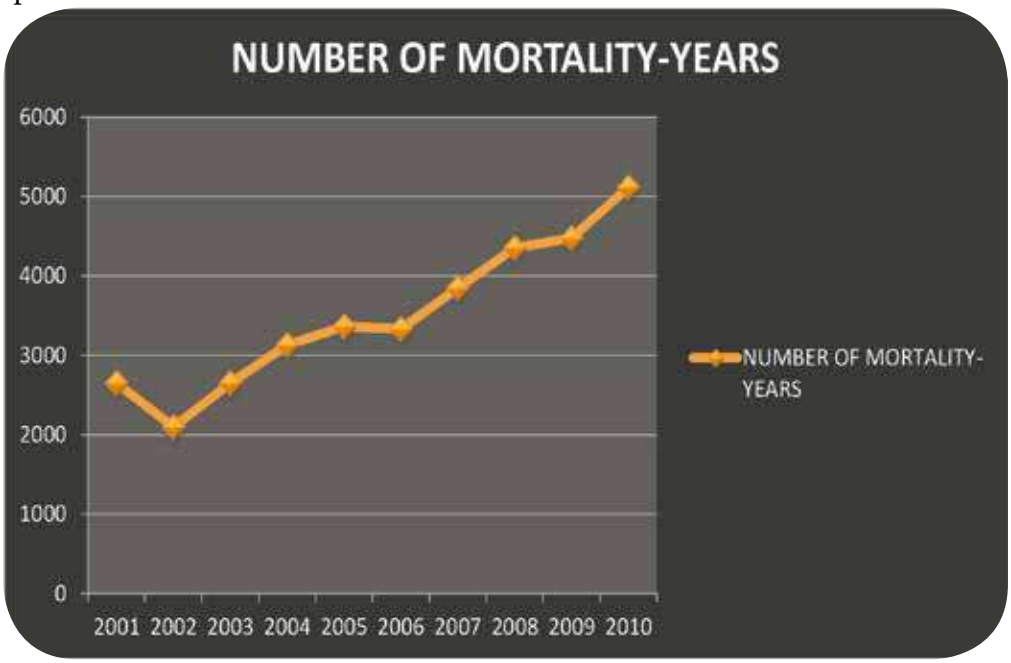
Among African countries, Ethiopia, low income country, has a relatively high burden of RTIs. There are less than 1 million cars in Ethiopia. But 1 out of 200 cars is killing someone.
According to the National Road Traffic Office data, 18,309 road traffic injuries occurred in Ethiopia in 2007EC amongst which 4,352 were fatal. In 2010 EC it increase to 5118. (18 % Increase)

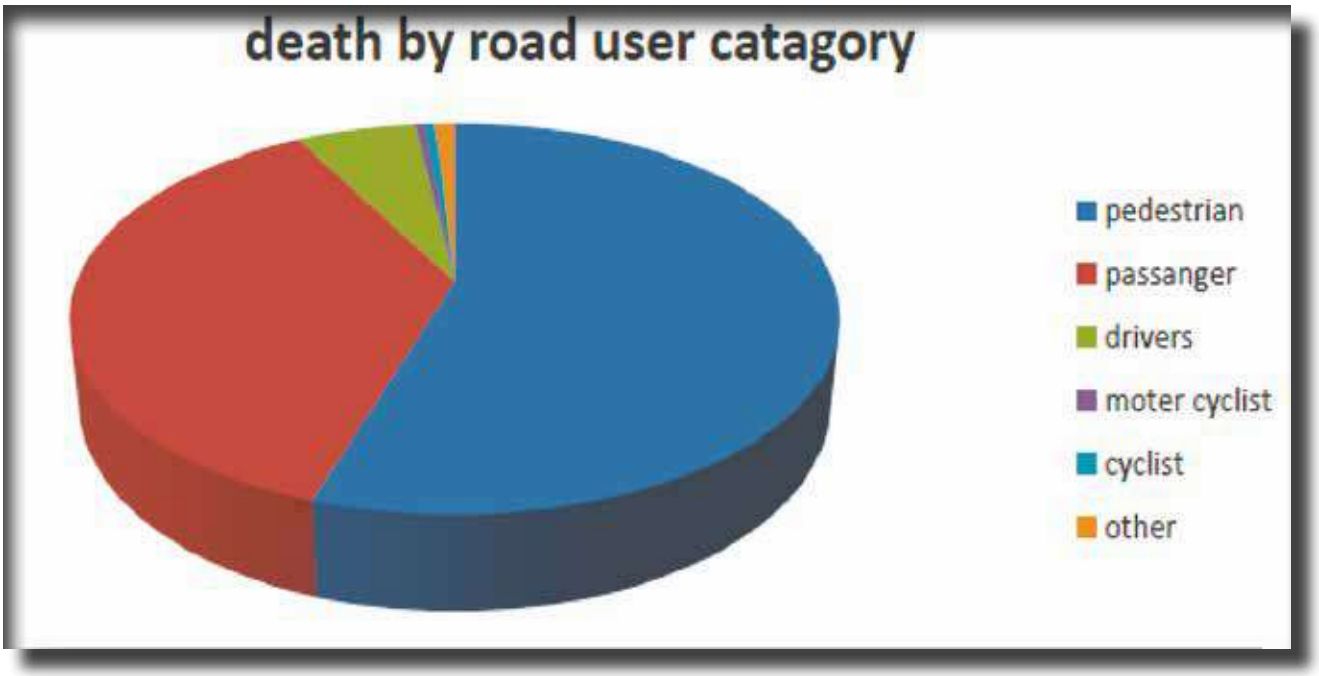
The number of Cars in Addis increases by 4% every year and that of Motor cycles by 11%

The road traffic injury cost analysis was estimated between 340–430 million Ethiopian Birr (ETB) which is 0.8–0.9% of the gross domestic product.

According to Ethiopia's National Road Safety Council, 81% of crashes in Ethiopia are attributed to driver error.

According to the federal police commission report, pedestrians and passenger are the highly likely victims of fatality accidents.




From the Major surgeries at tash orthopedics department done from 1987-2017, 30 years, trauma related accounts 70%. Since it is the most common reason for permanent disability and mortality, our department continued to play indispensible role in the management of these patients among other disciplines.
The major risk factors for RTI include high speed of cars, drinking and driving , no seat belt and child restraints , Medicinal and recreational drugs use , no helmets, using hand-held mobile phones, poor vehicle

design and maintenance, etc… .
The higher the speed, the shorter the time a driver has to stop and avoid a crash and the more severe the injury. Every 1Km/Hr increase in speed there is 3% increase in Traffic incidences. An adult pedestrian has less than a 20% chance of dying if struck by a car at less than 50 km/h but almost a 60% risk of dying if hit at 80 km/h.
Like speed, alcohol consumption increases the probability that RTI will occur. A review of published studies found that limits of 0.05 g/dl for the general population and a BAC limit of 0.02 g/dl for young or novice drivers can reduce its rate to a minimum.

Despite the growing burden of RTIs, road safety remains a neglected issue in many developing countries and the health sector has been slow to recognize it as a priority public health problem. A large body of evidence suggests that RTIs are easily be avertible.
Now that from any other time we all know how our country is so much incurred with road traffic injury, we have to find a way to prevent it and give optimal treatment for those victims and be exemplar to the rest of the world.

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# 14th ANNUAL ESOT SCIENTIFIC CONFERENCE

## July 11th, 2019, Morning Session

| Time | Program: Pannel discussion | Presenters | Moderators |
|---|---|---|---|
| Before 08:00am | **Medical Exhibitors organize at their locations/booth** | | **ESOT-EC** |
| 08:00-08:30am | **REGISTRATION** | | **Secretaries** |
| 08:30-09:00am | **INTRODUCTION: Recognition of Guests, Partners and Major Sponsors** | **Company Reps.** | |
| 09:00 am | **Guest of honor, the Minster arrives, Escorted by ESOT-EC** | | |
| 09:00-09:15am | **Presidential Welcoming Address** | **Dr. Geletaw** | **ESOT-EC** |
| 09:15-09:30am | **Opening speech H.E. Dr. Amir Aman. Minister, MoH** | | |
| 09:30-10:00am | **ESOT-Recognition Award Ceremony** | | |
| 10:00am | **Panel discussion: Challenges of Orthopaedic Practice in Ethiopia** | | **Biruk** |
| 10:00-11:00 am | *TEA/COFFEE BREAK/ MEDICAL EXHIBITION* | | |
| 11:00-11:30am | **How to Avoid complications in Proximal femur** | Sharma | **Dr. Samuel** |
| 11:30-12:00pm | **.Papers related to trauma** | | |
| | **Fin Nail outcome** | Teshome | |
| | **Acetabulum Patient Reported Outcome Measure** | Amanuel | |
| 12:00-12:30pm | **Discussion** | | |
| 12:30-1:30pm | *LUNCH AND MARKETING* | | |

| Time | Program | Presenters | Moderators |
|---|---|---|---|
| 1:40-2:10 pm | Case discussion: | | |
| | Femoroacetabular impingement | Dr.Brahmaraju T | |
| 2:30-2:50pm | **Discussion** | | |
| 2:50-3:30pm | *TEA/COFFEE BREAK/ MEDICAL EXHIBITION* | | |
| 3:30-4:30pm | **ESOT-EC Summary Report External Auditor's Report** | Dr. Geletaw Dr. Yiheyis | |
| 4:30- 5:30pm | • **AGM** (ESOT EC, Curriculum, Harmonization Sub-Committees, Waiting List Reduction) | | |
| | • Closing | | |

# 14th ANNUAL ESOT SCIENTIFIC CONFERENCE

**July 12th, 2019, Morning session**

| Time | Program: Paediatrics | Presenter | Moderators |
|---|---|---|---|
| 08:00 - 08:30am | DELAYED PRESENTING CAST RESISTANT CLUBFOOT TRIAL | | |
| 08:40 - 09:00am | FAMILIAL Madelung disease | Teshome | |
| 09:00 - 09:20am | **Hip Ultrasound in Developmental Hip Dysplasia- Is There a Need for Early Screening Strategy?** | Daniel | |
| 09:20-09:40am | | | |
| 09:40-10:00am | Discussion | | **Dr.Rick G** |
| 10:05-10:45am | **TEA/COFFEE BREAK/ MEDICAL EXHIBITION** | | |
| 11:00-11:20am | | | |
| 11:20-11:40am | | | |
| 11:40-12:00pm | | | |
| 12:00-12:20pm | | | |
| 12:20-12:40pm | Discussion | | |
| 12:40- 1:40pm | **LUNCH AND MARKETING** | | |

| Time | Program: Spine | Presenters | Moderator |
|---|---|---|---|
| 1:40-2:00 pm | | | |
| 2:00-2:20pm | Oncology burden at TASH | Biruk L | |
| 2:20-2:40pm | Bionic orthosis for LL amputation | Tsedey (eng) | |
| 2:40-3:00pm | Orthopaedic diseases in mobile use | Getahun | |
| 3:00-3:25pm | Discussion | | |
| 3:30-4:00 pm | TEA/COFFEE BREAK/ MEDICAL EXHIBITION | | |
| 4:00-4:15pm | | | |
| 4:15- 4:30pm | | | |
| 4:30-5:00pm | .Discussion | | |

# Management of Neglected Traumatic Hip Dislocation in Children

Gardner ROE, Worku N, Tilahun T, Nunn T, Etsub M
CURE Ethiopia Children's Hospital, Addis Ababa

## Introduction

Neglected traumatic hip dislocation in children is uncommon and there is no consensus on appropriate management. Previous studies report high rates of avascular necrosis and post- operative subluxation/dislocation. We report a series of seven consecutive cases who underwent operative reduction following neglected hip dislocation.

Patients and Methods

All seven children sustained posterior dislocations and had no treatment prior to presentation at our institution. An associated marginal acetabular fracture was present in two cases. One additional patient was excluded from the study due to complete loss of articular cartilage that precluded open reduction. The mean time prior to surgical intervention was 13.1 months (4-36) with a mean age of 7 years (5.3-10.8). All children underwent pre-operative skeletal traction for 10-14 days. A postero-lateral approach was used in all cases. The acetabulum was cleared of scar tissue and a femoral shortening performed as required (five cases). Minor erosion of the articular cartilage of the posterior aspect of the femoral head was noted in 3/6 cases. Following reduction, a posterior capsulorrhaphy was performed and the patient immobilised in a hip spica for 6 to 12 weeks.

## Results

The mean follow-up was 44 months (33-56). The majority of children (86%) could walk and run without a limp, could squat and had no pain. One child had mild pain and a limp. Mean Harris Hip Score was 98.9. No hip subluxed or dislocated post-operatively. The radiographs at latest follow-up showed no evidence of growth disturbance in 29% of cases, coxa magna in 57% and partial femoral head collapse in one case (14%). Of note, those patients managed within 8 months of injury had none or minimal evidence of growth disturbance.

## Conclusion

At medium-term follow-up, open reduction with a postero-lateral approach, posterior capsulorrhaphy and femoral shortening (as required) produces a satisfactory outcome with a stable, congruent reduction. Good clinical function can be expected with a low incidence of avascular necrosis.

Significance

This study describes a promising treatment regimen for this uncommon but challenging condition.

# Traumatic Anterior Dislocation of The Hip Associated with Ipsilatral Subtrochanteric Femur Fracture :

Wuhib Getachew , Beza Birhanu, Mossia Teshome , Adane Daniel ,Biresaw Biniam
Department of Orthopedics and Trauma Surgery ,Bahirdar University Hospital ,Bahirdar ,Ethiopia , April 2019

- A 20 year old male patient was brought to emergency department following RTA
- Radiographic examination shows right femur subtrochanteric fracture with ipsilateral obturator type anterior hip dislocation and contralateral iliac wing fracture
- Open reduction of the hip and antegrade IM nailing of the subtrochanteric fracture performed
- At four weeks of operation he started non weight bearing mobilization

**Key words**

- Hip dislocation, subtrochanteric fracture, high energy trauma

**Introduction**

- Traumatic anterior dislocation of hip with ipsilateral subtrochanteric fracture is rarely encountered in clinical practice(1).
- This type of injury requires a special mention because of peculiar mechanism of injury, problems encoun tered in treating such cases
- Here we report a case of right side traumatic anterior hip dislocation with ipsilateral subtrochanteric fe mur fracture and left side iliac wing fracture in a 20 years old male patient

Clinical case

.A 20 year old male presented with road traffic accident of one day duration.

- He was an assistant driver of a truck and the truck rolled over and he sustained trauma to his right thigh and hip area.
- On arrival to the emergency room analgesic given and clinically examined .
- Vital signs were in the normal range.
- The right thigh was deformed and the right hip was in abduction and external rotation position with femur head palpable in the obturator area.
- Femoral pulsation was palpable and distal neurovascular structures are intact
- Pelvic and thigh radiograph was taken and showed right side obturator type anterior hip dislocation with ipsilateral subtrochanteric femur fracture and left side iliac wing fracture (fig1).
- CT scan was planned to obtain to look for associated pelvic fractures but the CT scan was not available at the moment .

Fig 1 : AP x-ray showing subtrochanteric femur fracture with ipsilateral Obturator type anterior hip dislocation

- Then the patient taken to the operation theater and spinal anesthesia given
- Using an incision over the greater trochanter , steinmann pin inserted to the Greater trochanter ( fig2) and closed reduction tried with sustained traction in abduction direction and pressure over the femur head applied from the obturator area to push into the acetabulum but it was not successful
- Then using anterolateral approach to the hip the capsule opened and the femur head reduced to the acetabulum.
- Then the subtrochanteric fracture was opened using lateral approach to the femur and fracture reduced and fixed with antegrade interlocking IM nail (fig3)
- At the end of operation the stability of the hip checked by performing a 90 degree flexion, internal-external rotation & abduction-adduction

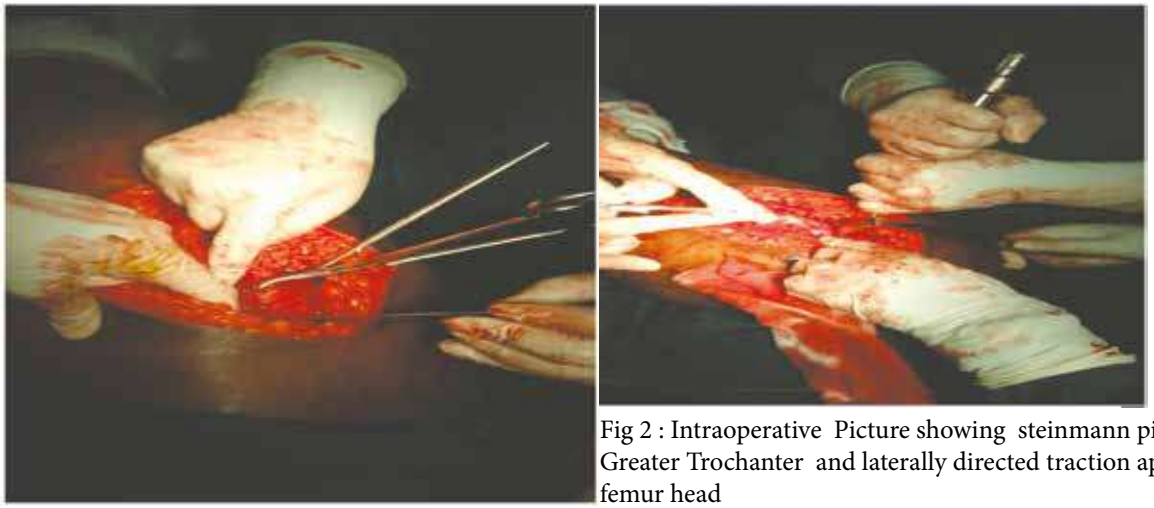

Fig 2 : Intraoperative Picture showing steinmann pin inserted over the Greater Trochanter and laterally directed traction applied to reduce the femur head

- Post operatively the left lower limb was immobilized with skeletal traction with the hip in adduction position
- Subsequently knee bending exercises and quadriceps strengthening started .
- Then he started non weight bearing mobilization with walker after six weeks .
- Subsequently radiographic imaging done at 6 month(fig 4) and one year shows the fracture healed well and no sign of femur

Fig 3 : Post operative x –ray showing right femur head reduced & the subtrochanteric femur fracture fixed with

Fig 4:follow up x-ray at six month showing fracture healing

Fig 5: x ray at one year showing healed fracture

.After one year & three months of the operation patient reported outcome measure using the Modified Harris Hip Score(MHHS) was done to assess functional outcome .
.The assessment was done using telephone interview ,because the patient couldn't come to the follow up and the score was 88 and the patient has no pain or functional limitation

**Discussion**

.The hip is a stable joint with a good congruence between the femoral head& acetabulum and reinforced by thicker capsule & strong ligaments(2)

- so, it requires significant trauma for hip dislocation
- The commonest is posterior dislocation while the anterior hip dislocation accounts 10-15% cases (3)
- Anterior hip dislocations results from high energy trauma which causes forced abduction& external rotation of the hip(4)
- Based on the position of hip at the time of impact, it can be superior type if in extension position or inferior type if the hip was in flexed position (5)

**Conclusion**

.The outcome of such cases depends on rapid evaluation & early intervention and usually it requires a multidisciplinary approach to identify & treat associated life conditions

- Early and stable reduction of the dislocation& firm internal fixation of the fracture as soon as possible will allow early rehabilitation & to prevent late complications
- The main peculiarity of the presented case is the association of the anterior –inferior dislocation with ipsilateral subtrochanteric femur fracture
- the latter can be explained by the developing of powerful forces that act on the shaft
- Another rare aspect of this case is the absence of associated acetabular fracture even though he had contra lateral iliac wing fracture
- Hip dislocation is an orthopedic emergency requiring urgent reduction to prevent late complications like AVN of femur head
- Other complications include osteoarthritis, neurovascular injury& hetrotopic ossification

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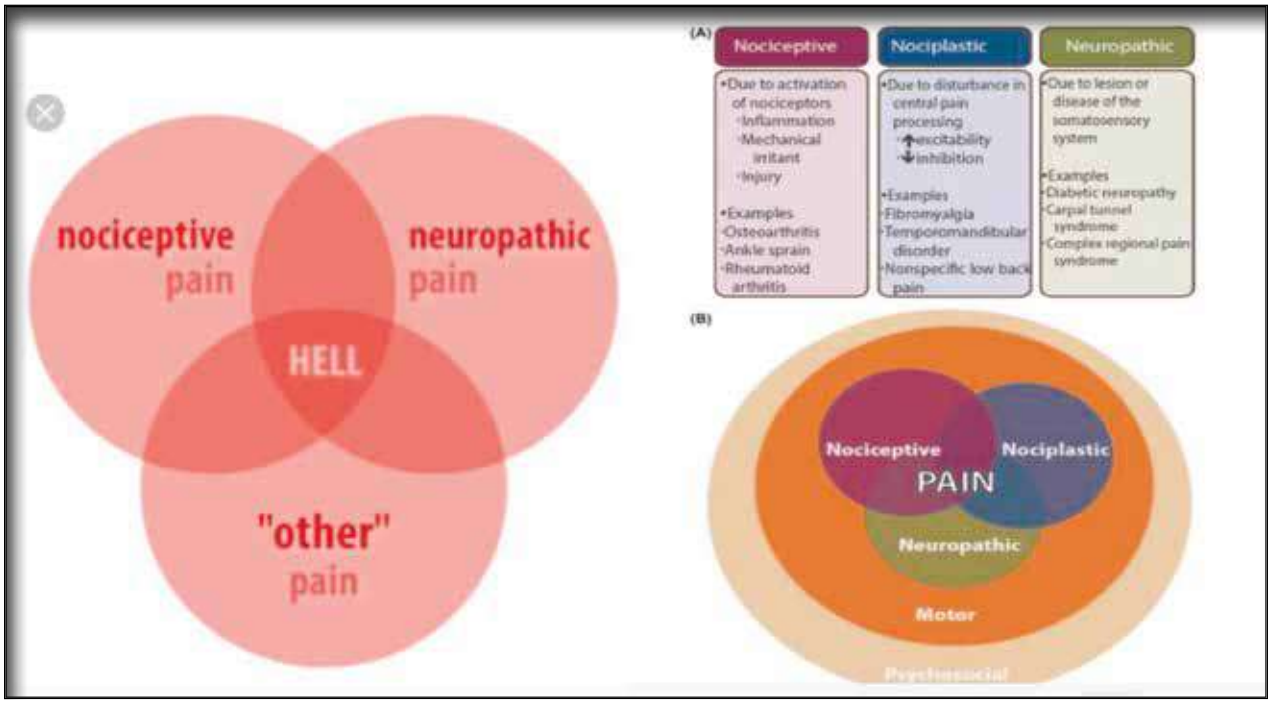
# UPDATES on RA,
# Strategies for rheumatoid arthritis (RA) therapy; the old& the new

Dr. Gemechis A. Geleto AAU, R3

RA: is chronic progressive systemic inflammatory disease that preferentially affects synovial tissues. Pathophysiologically, it is believed to be an Auto-immune reaction; precise etiology of which is unknown. The resulting antigen –antibody reactions causes synovial infiltration with leukocytes. then upon phagocytosis of these antigen-antibody complexes leukocytes release lysozymes, oxygen free radiacals, leukotrienes (Il1, IL6, IL 17, IL 23, TNF alpha) which are responsible for acute inflammation (joint pain and swelling) and progressive joint destruction as well.

- International Association for the Study of Pain(IASP) describes four main types of pain being newly added in 2017. These are:

1) Nociceptive pain: to peripheral tissue damage perceived by peripheral pain sensories. Of which RA pain is also ascribed to.
2) Neurophatic pain: pain due to damage to the nervous system itself be it central or peripheral.
3) Nociplastic pain (newly added type in 2017.centrally caused) : Pain that (a) arises from altered central nociception




function (malfunction) despite no (b) clear evidence of actual or threatened tissue damage causing the activation of peripheral nociceptors or (c) evidence for disease or lesion of the somatosensory system causing the pain (IASP Taxonomy 2017)
4) Other types of pain: pain that arises from neurological dysfunction not damage. Like fibromyalgia, algophatic pain, Alloplastic pain etc. But some one can have more than one type at a time.

Aims of treatment of RA:
1) Slow the rate of disease progression. No radiological and clinical progression of joint destruction.
2) Control inflammation and pain; ideally the patients should be as free as possible from pain.

- No inflammation
- No tender or swollen joints
- Normal quality of life
- Normal function
- Normal participation in social and occupational activities
- None or lower level of comorbidities
- Normal life expectancy

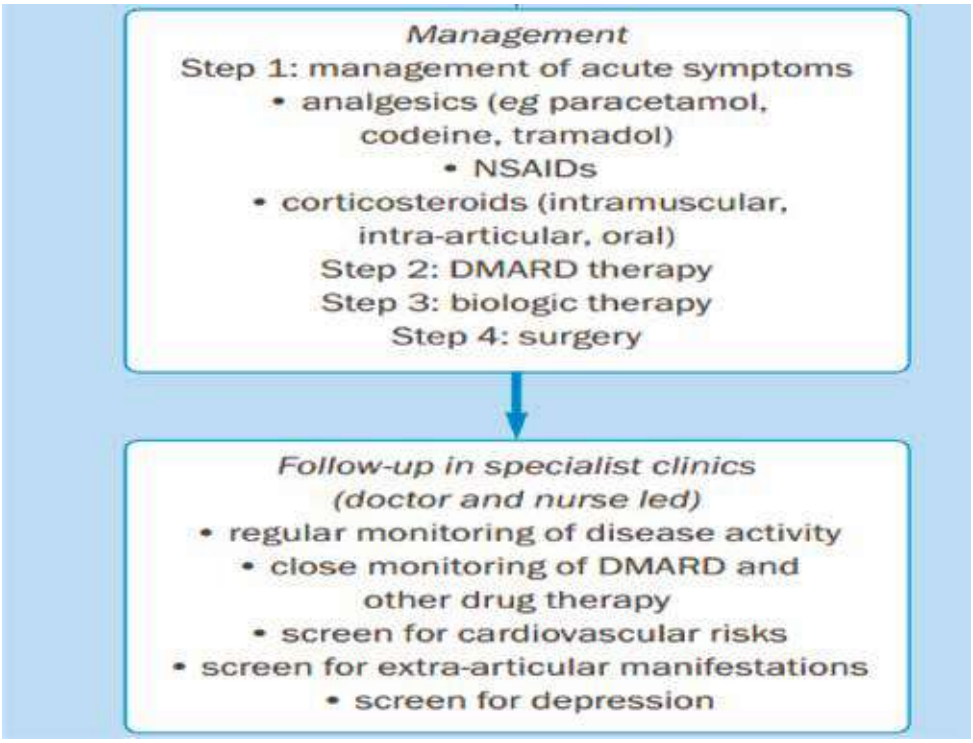
Pharmacological therapies OF RA: NSAIDs and steroidal Anti-inflammatory drugs:

RA was treated symptomatically with non-steroidal and steroidal anti-inflammatory drugs, which still have a place in the management of RA. The use of these drugs is self-limiting through the corrosive effects of nonsteroidal drugs such as aspirin on the gut and the serious effects of steroidal drugs on, for example, water retention and redistribution of body fat. Furthermore these treatments do not slow the progression of tissue damage and loss of hand use and mobility

Synthetic DMARDs : methotrexate, Hydroxychloroquine; Sulfasalazine; Leflunomide;

penicillamine, gold and azathioprine, commonly known as DMARDs, or disease-modifying anti-rheumatic drugs, have been used for several years. These may provide symptomatic relief and slow the progression of the disease, but are associated with serious adverse effects and

are relatively non-specific in their actions.




NEW GENERATION OF RA THERAPY: BIOLOGIC DMARDs:

- Essentially, these are monoclonal antibodies (MAbs) directed against chemical mediators of inflammation,notably TNF- a, and interleukins IL-1 and IL-6 ;IL-17, IL -23

These MAbs compete with the endogenous ligands at their receptor sites on cell. But they may have serious adverse effects due to the lowering of resistance to infection through their powerful inhibition of the immune system. but still they are more preferal than others.

BIOLOGIC DMARDs medications: The list is always growing:

- Abatacept (Orencia)
- Adalim umab (Humira
- Anakinra (Kineret)
- Etanercept (Enbrel)
- Infliximab (Remicade)
- Rituximab (MabThera),

New concept of treat to target strategy ( T2T)

- new trend in RA therapy that employs strict monitoring of the disease activity and adjusting of management strategy if a treatment is not promising
- The ACR, European League Against Rheumatism (EULAR), and the Asia Pacific League of

Associations for Rheumatology (APLAR) have used the treat to target strategy in their recommendations (Lau et al., 2015; Ramiro et al., 2017; Singh et al., 2016).

Currently, the purpose of treatment is to remit the disease activity, which results in amelioration of physical function. Furthermore, remission due to such strategy prevents joint damage or its progression (Aletaha, Smolen, & Ward, 2006; Smolen,
Aletaha, Grisar, Stamm, & Sharp, 2009).
Designing new treatments for RA therapy should provide at least a 50% improvement in disease activity during 3 months of administration (Aletaha, Alasti, & Smolen,
2015), and the treatment goal should be achieved within the 3 months ahead. If these goals not reached, the treatment strategy should be modified or altered;
What are RECENT ADVANCES AND on going studies about RA therapy?

- Cell therapy: MESENCYMAL STEM CELL (MSC)THERAPY
- EPEIGENIC THERAPY:
- COMBINATION THERAPY OR SIGLE DRUG THERAPY (SYNTHETIC DMARD with BIOLOGIC DMARD)
- TARGETING WHICH SPECIFIC LEUKOTRIENE IS MORE EFFECTIVE IN RA TREATMENT IL-1 OR IL-6, OR IL-17,OR IL-23? ARE REASERCH TOPICS YET TO BE ANSWERED.

# Osteoporosis: did we find a cure?

**By Dr. Alpha Seifu, R1, AAU.**

About **200 million** people suffer from osteoporosis worldwide; Resulting in **1.5 million pathologic fractures every year.** That is, **1 in 3 women** and 1 in 5 men will suffer a fracture because of osteoporosis. For many, a pathological fracture is a starting point of a downward spiral to disability and all the medical and socioeconomic complications that come with it. hip fractures lead to death within one year for 15 to 20% of older women who suffer them. And 50% will never get back to their previous level of independence despite the best possible care.

Over the past 2 decades, bisphosphonates have become the first line therapy for osteoporosis. Although these drugs have shown to be effective in decreasing rate of pathological fractures (upto 70% for spine fractures), they only inhibit bone resorption via different mechanism; they do nothing to stimulate bone formation. In contrast, parathyroid hormone derivatives stimulate bone formation but they also break it down.
The FDA recently approved a drug that has shown to do both. **Romosozumab** (brand name- **EVINITY**), is a humanized monocolonal antibody that blocks sclerostin( a protein that inhibits bone formation).it takes advantage of a rare genetic mutation???. Evenity is approved for post-menopausal women with a history of osteoporotic fractures or multiple risk factors for fracture. The drug is given in injection form once a month for a maximum of 12 months

It has undergone 2 randomized control trials involving 11,000 people.Trials showed upto a 15% increase in bone density which is almost equivalent to the amount of bone build up during adolescence ( a 6% increase in bone density is equivalent to doubling in strength).
A randomized control trial comparing romosoxumab and alendronate showed that 127 patients our of 2046 patients on the new drug suffered spinal fractures compared to 243 out of 2047 patients on alendronate
This drug however is not without its side effects. In addition to hyperostosis, osteoarthritis and osteonecrosis of the jaw, sub trochanteric femur fractures, rise in heart attacks, strokes and sudden death are among them.

Perhaps equally impressive to its effect on bone is this drug's back story. In 1964, researchers began studying and an unusual group of Afrikaners in south Africa, these individuals had a rare autosomal-recessive genetic mutation resulting in phenotypic features like large and dense bones that grew profusely resulting in distorted heads, facial nerve palsy due to impingement, deafness and terrible headaches.
Around 20 years ago, the determinant gene (SOST gene) was identified and the disease dubbed Sclerosteosis- a severe, progressive, autosomal recessive craniotubular hyperostosis. Scientist came to realize that the genetic mutation in these patients halts production of sclerostin( a protein that stimulates bone resorption and inhibits bone formation) there by resulting in uncontrolled bone formation . This birthed the idea of a sclerostin-blocking drug- evenity.
Post-menopausal osteoporosis is a significant women's health issue that far too often gets overlooked. There is an overwhelming and ever increasing amount of morbidity and mortality related to osteoporosis. In busy setups like ours at Tikur Anbessa Specialized Hospital where orthopedic care provision is dominated by trauma, osteoporosis and osteopenia are alarmingly neglected: underdiagnosed and mismanaged. In the emerging modern Ethiopia, with the help of public/mass awareness and availability of DEXA machines now, Prevention, management, follow-up and rehabilitation are possible. If not seriously taken, OP issues and consequences are life altering.

# Meat Grinder Injuries to the Upper Extremity in Children – A Case Report

Compiled by Dr. Samuel Shiferaw

Mutilating upper extremity injury secondary to machine injuries are commonly seen in adults following industrial accidents. Meat grinder injuries in children are uncommon occurrences rarely seen in the emergency during duty hours at Tikur Anbessa Hospital. However, when they occur, they often occur in males and involve the dominant hand often resulting in long-lasting disability due to amputations at varying levels. Below is a case discussion on Meat Grinder injury in a two year and eight months old infant who presented to our hospital during duty hours. ESOT mambers encountered around five such sever injurils in recent years. Public awarness is suggested.

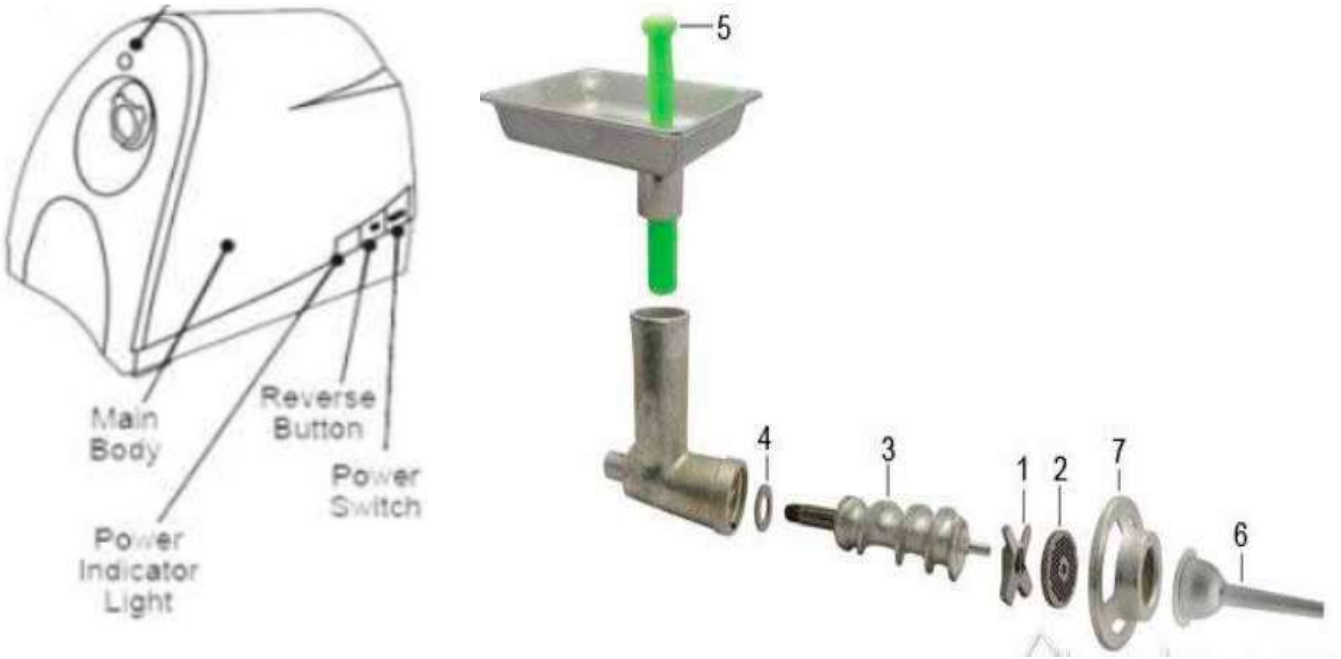



Figure 1. Comercial Meat grinder body Parts

1. Meat Grinder Knife
2. Chopper Plate
3. Worm
4. Worm Thrust Washer
5. Direction of Meat Insertion
6. Stuffing Tube
7. Economy Ring

A.K. is a two year and eight months old male toddler who sustained Meat Grinder injury. One week prior to presenting to our hospital, his hand was caught in a commercial meat Grinder while the family was preparing a meal. The family noticed his accident when he started to cry uncontrollably and rushed to turn off the machine. By then, he was already elbow deep in the meat grinder. They immediately took him to Adama Referral Hospital with the child's hand still entrapped in the Meat Grinder (Fig. 2). The Grinder was disassembled in the hospital and the worm (Fig. 1) was manually reversed using a wrench while simultaneously applying an upward gentle traction to the arm to free his hand. He was then taken to the OR where debridement and wound closure was done without any neurovascular repair (Fig. 3). He was then referred to our hospital after six days of stay. At presentation to Tikur Anbessa Hospital, patient's right hand had darkened palmarly up to the level of the wrist and dorsally up to the level of the MCP joints of all five fingers (Fig. 4). He presented with long arm posterior applied and an x-ray image showing multiple phalangeal and metacarpal fractures of all five fingers (Fig. 5). His vital signs were normal with normal leukocyte count and ESR & CRP Levels were also within the normal range. He was already given IV third generation cephalosporin in all his stay at Adama Referal Hospital. The patient was admitted to our pediatric ward and observed for one week to wait for the darkening to demarcate before deciding on the level of amputation. After one week of stay in the ward, wrist disarticulation was done and wound was closed primarily.

Figure 2. Patient A.K. Arm still entrapped inside the Meat Grinder

Figure 3. (A&B): Demonstrate primary wound closure following debridement of Patient A.K.

Figure 4. (A&B): Patient A.K. discoloration of the hand at the presentation to Tikur Anbessa

Figure 5: Patient A.K. Hand x-ray taken at Tikur Anbessa Hospital

## Discussion

Meat-Grinder injuries are among the rare cases encountered by an Orthopaedic Surgeons. In fact, only case reports and series exist to describe the phenomena as it is a rare occurrence. The aim of this case report is not to impress on the reader the epidemiological significance of this type of accidents, but to describe the appropriate order of management so as to maximize the survival of the injured extremity. It is important to note that patients often present to the emergency with the Meat Grinder still attached to the patient's arm, and it is often the duty of the Orthopaedic surgeon to participate in the extrication of the arm. The Worm (Figure 1.) is designed in a way that the blade runs cuts and pushes the meat forward when it runs in clockwise direction. The meat grinder machine will either have a manual reversing technique or a reverse button attached that runs the worm in a counter-traction direction. Extrication of the arm is achieved by pulling the extremity upwards while simultaneously reversing the spin of the worm. This will result in minimal further tissue damage as the extremity is freed. Then Patients need to be taken to the OR immediately and proper debridement with primary neurovascular repair need to be done to increase the survival of the extremity. In our setup, where we don't have a Hand surgeon available to perform neurovascular repair, prevention in the form of creating awareness in parents becomes very important. Awareness, on the part of Orthopaedic Surgeons, on the simple way of extricating the injured extremity from the Meat Grinder with minimal soft-tissue damage is also paramount.

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# Summary of key AO Alliance Ethiopia Country Initiative activities and achievements

**Reported by Carla O'Donnell**

## Courses in 2019

- AOA and ADFA successfully conducted three back-to-back courses targeting frontline healthcare workers involved in operative fracture treatment. Forty operating room personnel (ORP) kicked off the education marathon on March 17, 2019. Twenty participants were from outside Addis Ababa. For the first time, the town of Hossana was able to send nurses to attend the sought after course.
- March 20-22, 2019. AOA/ADFA Pre-Basic Principles of Fracture Management for Residents, in collaboration with CURE Ethiopia and Tikur Anbessa Specialized Hospital. Famed runner Haile Gebreselassie made a surprise visit to the course, as the Patron of ADFA. National course Chair Samuel Hailu, ADFA CEO Graham Forward and regional course Chair Joseph Mwanga from Tanzania led the event.
- March 25-27, 2019. After a seven-year hiatus, AO Alliance returned with its operative fracture management course. This course teaches more advanced operative techniques to senior residents and young surgeons. The course was chaired by Geletaw Tessema and Nicholas Lubega from Malawi.
- Biruk Lambisso Wamisho, Head, Department of Orthopedics, Addis Ababa University (AAU), Head of Trauma and Orthopedic Surgery at Tikur Anbessa Specialized Hospital, said "I have no words to fully express your impact here. Thank you for teaching my residents to help their patients."

## Key achievements from 2015-2018

- 8 reverse fellowships in Hawassa were carried out with the UK
- Over 300 first and second year residents from all training T&O programs in the country were trained in Nonoperative Fracture Treatment
- Over 150 first and second year residents were trained on Basic Principles of Fracture Management
- Over 170 operating room personnel were trained on Basic Principles of Fracture Management
- Over 70 first and second year residents from BLH were sponsored to do rotations in Hawassa
- Hawassa and Bahir Dar were appointed as new regional reference centres
- Gondar and Harar have resident exchanges with Bahir Dar and Black Lion Hospital (BLH) respectively

**AOAF agreed to fund ESOT AGM 20 thousend USD every year for 5 years (2018-2022)**
**-We thank for this support last year & this year, and continues.....**

AO Alliance Foundation


AO ALLIANCE
AUSTRALIAN DOCTORS FOR AFRICA
ጥቁር አንበሳ
TIKUR ANBESSA
AOAF/ADFA Pre-Basic Principles Of Facture Managment for Residents
Saro Maria Hotel
March 20-22, 2019
Addis Ababa , Ethiopia


AO ALLIANCE
Ethiopian Society of Orthopaedics and Traumatology
AO Alliance Course on Basic Principles of Fracture Management for Residents
March 25-27, 2019 Addis Ababa, Ethiopia
Course venue
Saro Maria Hotel, Addis Ababa, Ethiopia
ጥቁር አንበሳ

# COSECSA News

## 2018 Clinical/ Viva Examinations

The Membership (MCS) and Fellowship (FCS) Clinical /Viva examinations were successfully held on 03rd and 04th December in Kigali, Rwanda. 58 MCS and 94 FCS candidates sat for the exams, of which 51 MCS and 85 FCS were successful.
The examining took place at the Kigali Convention Village (Exhibition center), the King Faisal Hospital, CHUK and the Rwanda Military hospital. There were over 230 examiners in attendance including the College Court of Examiners (CoE).
COSECSA Fraternity is sincerely grateful to the Rwanda Country Representatives, administration, doctors, Nurses and all those who supported the examination process from Rwanda without whom this would not have been possible.
We are delighted to announce the 2018 overall best candidate for MCS- Daniel Jawarnorita Yoseph from Tanzania.
Dr. Nyangau Andrew Nyaocha from Kenya, who specialized in Neurosurgery was the overall best 2018 FCS candidate. Congratulations for the hard work!

## Graduation Ceremony

The COSECSA graduation numbers have been on a steady increase, with a total of 85 FCS successful graduates receiving their qualifications on 5thDecember 2018. In 2017 the total number stood at 55. The ceremony was graced by the Honorable Minister of Health for Rwanda who was the Chief guest of Honor. Presidents of Sister Colleges around the globe, implementing partners, International Organizations, Fellows, Friends and Champions of our cause were in attendance making the occasion extremely colorful.
The Rwanda Surgical Society hosted the event that had approximately 600 guests, including the graduates.


**The Mother Orthopaediics Department In Black Lion Hospital is once again very proud !**

**The Magnificent 8 did it in Kigali. congradulations!**

**The Number of COSECSA Ortho examinees from AAU is Progressively increasing was 2 in 2006, 4 in 2017,8 in 2018 & this year 14 are ready for Uganda. Next Year, 2020 the Number will be very high because St.Paul & Bahir Dar Departments will have their first ever graduates.**

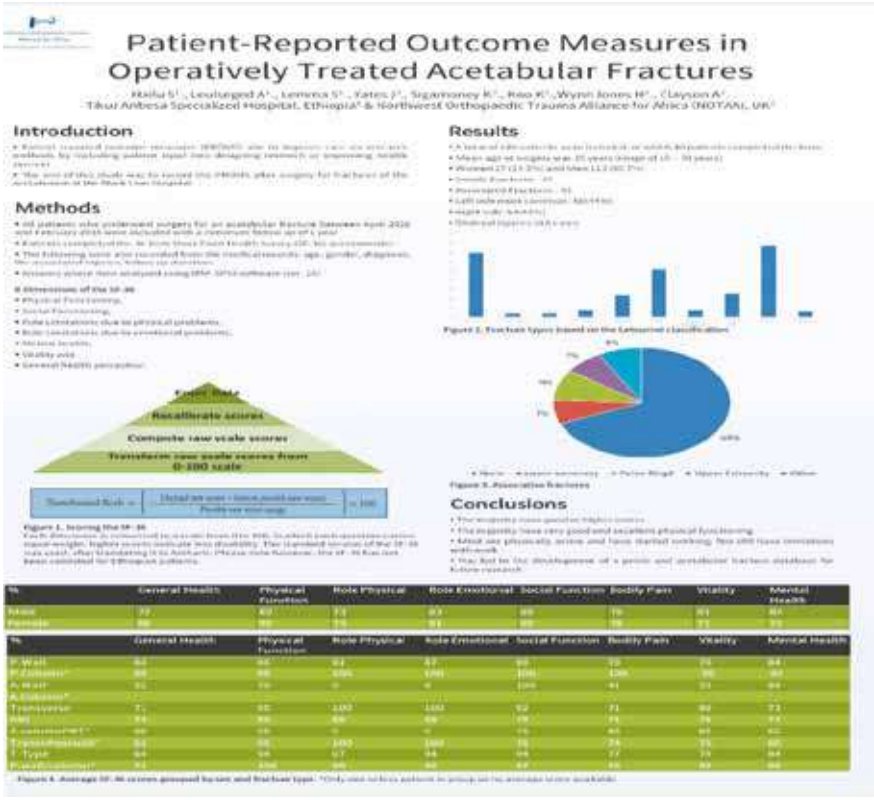
**We thank AOAF for starting funding for this exam.**

# THE 3rd ETHIOPIAN ORTHOPAEDIC RESIDENT'S DAY 2019

The Third Resident's Day was held on March 29th, 2019 in the beautiful city of Hawassa, at the premises of Hawassa University Comprehensive Specialized Hospital(HUSCSH) under the theme of 'Patient Reported Outcome Measures' and 'Patient and Public Engagement'.

Resident's Day is an annual Research presentation day for resident's that was successfully launched in 2017. It is the brain-child of Dr. Kohila Vani Sigamoney, an Orthopedic Registrar in the UK; who has been training our residents to fill the gaps she has observed in areas like research design, conducting small scale studies, and basic analysis. She was inspired by her late dear grand mother, madam KAMALA, and has been fully committed in coordinating and running each year's activities.

Dr. Kohilla and the team from The Northwest Orthopedics and Trauma Alliance for Africa (NOTAA) led by Dr. Tony Clayson, Orthopaedics and Trauma Surgeon have been making annual visits, sponsoring these events and giving prizes for residents. NOTAA was established in 2016 by Tony Clayson and Henry Wynn Jones, both Consultant Trauma and Orthopaedic Surgeons at the Northwest Pelvic Trauma Unit, Wrightington Hospital, UK.




Residents from all sister schools running Orthopaedic residency were invited and for the first time a group of Mechanical Engineers also took part in the presentations.

The day began with short teaching sessions on Research Methodology prepared by the NOTAA team, followed with oral presentations by the participants and poster competition for the different studies. A poster is diagrammatic description of a study on a single page.

A Poster prepared for the study; Patient Reported Outcome Measures(PROM) on Operatively Treated Acetabular Fractures at the Orthopaedics Center, TASH.

Some of the studies presented included a very exciting project to build a Bionic- Leg for amputees being developed by Engineer Tsedey and her team of experts from the Ministry of Science and Innovation?

The same team also in collaboration with Dr.Biruk L. , Dr. Lock , Dr. Wubalem Z and Dr. Bezawit T. presented the Ethiopian design for a transformative manually operated Wound-Vac (Negative pressure wound therapy machine); that would be simple to use and accessible for all National Health institutions at a very low cost.

Dr.Mengistu G.,Consultant, presented his findings on the impact the of the AO Non-Operative Fracture Management Training for interns; which is being developed as a national curriculum for Medical Schools across the nation.

Finally, all the participants were thanked and appreciated for their contributions; The Orthopaedics Center at Tikur-Anbessa Specialized Hospital was selected as the venue for the coming 4th Ethiopian Resident's Day. Dr

Biruk L. and Dr. Tony C. also expressed their desire and plan for more comprehensive Research course to be given to all residents starting from 2019. AOAF promised the funds.

Recognition ceremony was also held for the Nurse of the month at the Orthopaedics Department at HUSCSH and awards, certificates handed for all the participants.

The 2019 prize for the first place went to Drs Shukeria, Amanuel &Kohilla for the 'PROM' study led by Dr. Samuel

Participants and the NOTAA Team posing for a group Photo at the en of 3rd Resident's day.

# Outreach Orthopaedic Surgeries

Melesse Gardie, MD
Orthopaedic Surgeon

The Australian Doctors for Africa (ADFA) in collaboration with Danu orthopaedic center had been conducting outreach orthopedic surgeries, support for materials and infrastructures annually for about a decade in Hargeisa, Somaliland; and department of orthopaedics surgery in Blacklion Hospital had been closely following and supporting, especially in human power for all outreach campaigns.

This year was so special in its type that, the campaign was assisted with two local orthopaedic surgeons of the Hargeisa group Hospital, Dr. Abdreshid and Dr. Ahemed, who finished their residency in Addis Ababa University, Black lion Hospital in December, 2018, and SIGN intramedullary locking nails was used the first time in the Hospital during the campaign.

A total of 40 major surgeries had been successfully done with two orthopaedic surgeons Dr. Elias H. and Dr. Melesse G., with a dedicated assistance of our friends Dr. Abdreshid and Dr. Ahemed, in this year campaign, which stayed for four days. Long bone fracture fixation with SIGN IM nails in the lower limb, ORIF of upper extremity fractures, limb reconstruction surgeries mainly malunion and nonunion correction, and hemiarthroplasties of the hip joint were most of the activities done in the major OR of the Hospital which is having five OR tables. Rounds in the ward, out patient visits and screening for operation as well as some difficult pediatric surgeries including clubfoot correction had been done with Dr. Graham Forward, CEO of ADFA.

Special thanks have to be given for both ADFA and SIGN Fracture Care International, for this incredible support that; ADFA has been conducting the campaign yearly without interruption and also was supporting these two young surgeons in their orthopaedic residency training. Besides SIGN reached to this hospital in the right time, which is so motivating for orthopaedic activities to be conducted and also so benefitting for the community. Similarly, orthopaedic department of Black lion hospital has to be specially appreciated in effectively training these young surgeons and closely following the campaign that had been conducted annually.

Finally, I want to share my view which is expected from the whole orthopaedic community of Ethiopia and our special stakeholders and supporters, ADFA and SIGN Fracture Care International; as we all know orthopaedic service in Addis Ababa and few cities in regions of Ethiopia is recently growing but it is easy to speculate that the service is not comparable with the huge burden the country has from orthopaedic trauma injuries, musculoskeletal tumors, pediatric orthopaedic conditions, and the so on. The Hospitals in some large cities of different regions of Ethiopia like Afar, Benishangul, Gambelia and many Hospitals in the rest areas of the country including the capital city, Addis Ababa, have no organized orthopaedic services. The federal ministry of health of Ethiopia is currently revising the health service program and is also developing Roadmaps for different level Hospitals in the country; it is my view that diagnosis of some orthopaedic conditions and dedicated referral from primary level Hospitals, comprehensive orthopaedic services by orthopaedic surgeons in all general Hospitals, and advanced orthopaedic care including teaching of orthopaedic residents and fellows as well as orthopaedic research activities in all tertiary level Hospitals has to be effective in the next few years; off course this seems to be an activity to be left for programmers and health sector leaders but the truth and the secret for the success of these vision is with us. Until this becomes true we all are expected to participate in such outreach activities which had been conducted in Hargeisa and Harar with collaboration of AAU department of orthopaedics, ADFA and Danu orthopaedic center, and specially we have to design our own outreach activities in many different regions listed above or any accessible and feasible Hospitals around where we are working. Emergency orthopaedic outreach services given in this fiscal year with collaboration of FMOH, St. Paul and Black lion orthopaedic departments in some areas of Ethiopia where there had been instability are good starts and should be greatly appreciated. It is also important to think in supporting for neighboring countries like South Sudan and Eritrea by similar outreach activities or training orthopaedic residents. Development of some specialty centers or excellence centers in some advanced orthopaedic cares like orthopaedic spine, sports surgery, arthroplasty and advanced reconstruction centers also shall not be forgotten.

AUSTRALIAN DOCTORS FOR AFRICA

SIGN FRACTURE CARE INTERNATIONAL

College of Health Sciences

Department of Orthopedics & Traumatology

# Orthopedic emergency outreach services across different parts of Ethiopia

Story narrated by Dr. Ahmed Abdusemed, AAU. Final Year Resident from Jigjiga. An eye witness.

**Introduction.**

The year 2018/2019 was marked by internal displacement of citizens and ethnic conflicts which were all leading to unnecessary mass causalities, unacceptable deaths and injuries. For the worst, most of these tragic events were specifically more happening in the peripheries of the country where there is no nearby well established orthopedics and trauma setup with basic equipment fulfilled. So, we have to go to the conflict sites and treat the victims in time.

The august 4 black Saturday in the SSR, the Benshangul Gumzi's Assosa ethnic conflicts and the long time taking Gedieo-Guji ethnic conflicts were among the tragic remarkably significant memorable events that lead to high burden civilian causalities seeking immediate orthopedics and trauma care. We participated in all. Below is the summary of two selected major conflict fields:

1. Jijiga University Referral Hospital voluntary outreach orthopedic services

Upon august 4,2018 black Saturday of Jigjiga, the capital city of SSR (which is located from Addis 654 km to the East) and all the neighboring zonal capital cities of the region all of a sudden became a living hell for their residing nations. Major cities across the region became full blown dangerous zone where both residential and trade houses were demolished with fire to ashes. Even, the highly honored religious centers with their elderly religious leaders were not spared.

Jijiga university referral hospital (which is the only specialized referral hospital for the whole region) all of a sudden began to be over flooded with continuous mass causalities of different severities with no way/means to refer them to other hospitals. More over, the health professionals of the hospital who were taking their weekend in their houses were themselves parts of the victims. Hence; some were injured while the others flee to the nearby areas to save their lives.

Upon noticing the situation, the consultant orthopedic surgeon and a senior orthopedic resident found themselves in state of" locked in the hospital" with unimaginable number of mass causalities at once while they were undertaking their routine activities.

Hence they decided to save as much life they can at any cost whatsoever it may cost them. At the same time they call for national help and try to draw the federal governments and its institutions attentions urgently.

The FMOH, in collaboration with the AAU-TASH and St PMMC hospital orthopedic departments, managed to organize team of 5 orthopedic and trauma members along with other emergency medical team. Additionally, the two departments urgently managed to collect basic orthopedic and trauma equipment that may be needed at the site.

But the journey to there even being accompanied by the national defense force was full of challenges, insecurity and profound distress to every member of us. We flew to DireDawa and stayed on "alert mode". After 4 long days; finally, the political instability was handled by the government and we managed to reach JJU

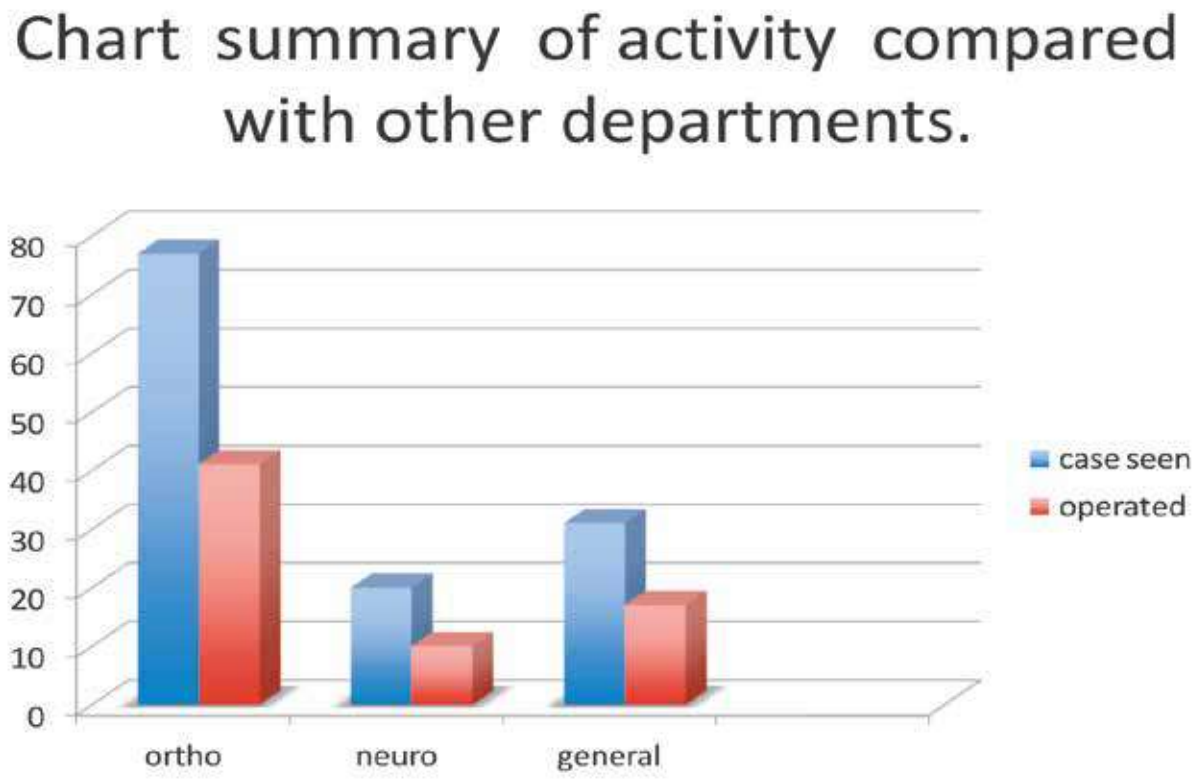
hospital safely.

Upon our arrival to the hospital there were around 214 salvageable victim causalities. 69% of these patients were in need of orthopedics and trauma care of different levels. Moreover more than 25% of these patients were poly-trauma patients with varying degrees of open long bone fractures who need urgent interventions. Out of the 128 patients who needs orthopedic care 53% of them were operated on the consecutive 5 days averaging to more than 13 patients per day (starting from 8am to 9/10pm.)

Total number of deaths up to our arrival to the hospital was 40. Only one additional poly trauma patient died from Fat embolism after our arrival.

As the first initiation of peace and Reconciliation process between the communities, our team held discussions with different respected community Elderly Religious Leader's, security officials of the area, the Regional Media and Higher Government Officials. This was a special additional but important practice, besides our usual Trauma care.

As the all the staff in the Hospital was not there, we were everything: Surgeons, Councilors, Cleaners, guards, etc. SIGN INM was greatly useful. We have seen the quick 'magic' work of K-nail as well. Good for field surgery! I have seen 2-3 patients lying on single bed, bleeding side-by-side.



## Arrival at dire dawa...military airbase.

## Hospital scenes upon Arrival


2. THE DILLA UNIVERSITY REFERAL HOSPITAL OUTREACH SERVICE

Introduction: -

Dilla university teaching referral hospital is the largest nearly accessible hospital for inhabitants of Gedeo Zone of SNNP, Guji and Borena zones of Oromia. Despite that the hospital was not providing any orthopedic service for long past years until Dr. Melesse G. went there in the beginning of 2018 and starts the service; it was a very harsh time where millions were displaced secondary to a conflict between Gedeo and Guji populations. Basic orthopedic instruments like small and large fragment sets, TBW set, External fixators, plates and screws, drills were purchased for the first time by the Hospital during that time and some additional basic instruments were supported by Black lion Hospital. The Orthopaedic Department also gave its specialist, Dr. Melesse to stay for more than half a year.

As usual, problems cause one to incline to possible innovations. A very similar to the standard hip Spica table was innovated by the guidance and help of Dr. Melesse from TASH (AAU) with local carpenters, and some tools like cutters were also purchased from the local area to help the victims.

Throughout the course of 8 months more than 130 major Orthopaedic surgeries, about 500 OPD visits, 89 minor procedures were performed. Main major procedures were: ORIF with plate and screws, k -wires, high number of External Fixators of both lower and upper extremities. Also there were various amounts of surgical wound care, flaps, skin grafts, I&Ds for orthopedic infections and non operative fracture care as well. Today, this center became one of the Hospitals where good trauma care is given.

3/ ASSOSSA Orthopaedic Outreach:

This is another site where ESOT members went and served the tragedy victims.

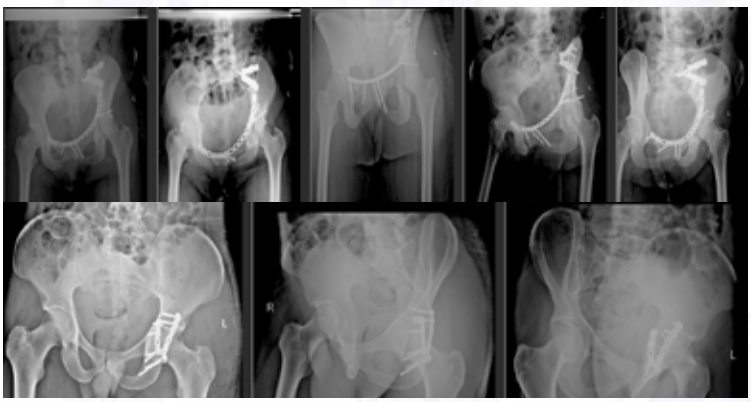
Equipment was donated from Blacklion and AaBET.

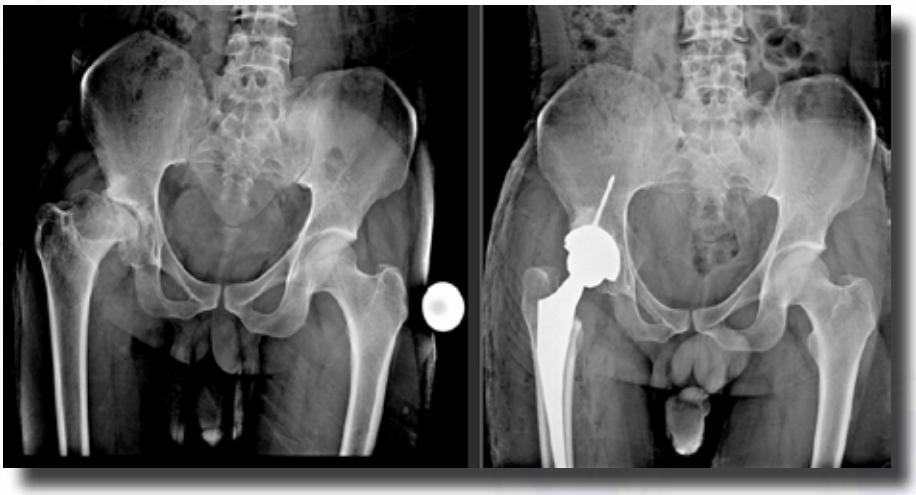




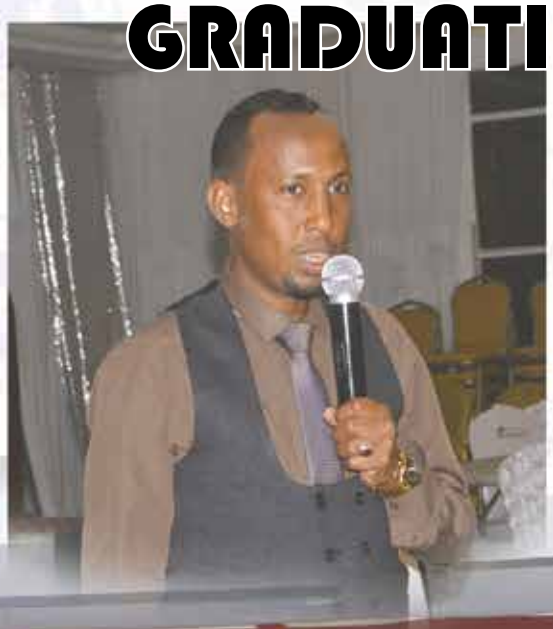


First Practice, then you"ll do complex fixations





# GRADUATING CLASS AAU, 2019



JUNE 2019

SIGN FRACTURE CARE INTERNATIONAL


# SIGN: Climbing the Next Mountains

The SIGN Family gathered on April 19 to celebrate SIGN Fracture Care's 20th Anniversary. **Thanks to the support of generous donors and the skill of dedicated surgeons, SIGN Implants have been used to heal the fractures of more than 238,000 people.** We are grateful to have helped so many, but more people need more help in more ways.

## The First Mountain

Dr. Zirkle recalled a speech by Nelson Mandela, which he loosely quoted: "I climbed a mountain looking for a rest. I was tired, but when I came to the top of the mountain, there was another mountain to climb." SIGN has been climbing the mountain of long bone fracture care for 20 years, Dr. Zirkle said. We have largely solved the problem of how to treat those injuries, though we are still learning and improving, and there is room for significant growth.

The first steps of the journey occurred in 1997 when Dr. Zirkle met with Randy Huebner, the founder of Acumed, a medical implant company. "I left completely thrilled with the opportunity to design products that purely served patients," said Mr. Huebner a longstanding SIGN Board Member. "And the other part is being able to design things that are sold in the United States for $1,500 for $150. As an engineer, it was impossible to not try and do that."

Acumed helped design and produced the first SIGN Implants and Instruments, which Dr. Zirkle took to surgeons in Vietnam. In the 20 years since, SIGN Surgeons and Engineers have refined the process of surgery and the products we create to effectively treat long bone fractures for people in developing countries.

## The Next Mountains

We have reached one peak, but that has revealed another mountain—indeed a whole range of mountains—to climb. In addition to long bone care in developing countries, SIGN Surgeons have identified continued improvements in our core procedures, pelvic fractures, deformity correction, and spine fractures as the next challenges.

The next mountains will be difficult, but we can build on what we have learned climbing the first mountain.

"There's a bridge from the first mountain," Dr. Zirkle said. "The bridge is the SIGN Database, where we keep records of all the surgeries, and we're getting more and more follow-up records to know how the patient really does." Because we have a baseline for healing success and the knowledge of how we've achieved it, we are well-placed to take on these new challenges.

## SIGN Surgeons Lead the Way

"Training a surgeon to put in a SIGN Nail is a beginning. *(Continued on page 3)*

***Dr. Zirkle and many members of the SIGN Family celebrated SIGN's accomplishments and looked to the future.***

# 2019 SIGN INTERNATIONAL ORTHOPAEDIC CONFERENCE

*The SIGN International Orthopaedic Conference provides a unique educational experience for surgeons. It is the only orthopaedic conference focused on issues faced by surgeons in developing countries. The conference is built around hands-on learning, helping surgeons to develop their practical skills as well as increasing knowledge.*

## Bioskills Lab

A bioskills lab provides the closest simulation to a live surgery. Under the guidance of experts from around the globe, SIGN Surgeons are able to experiment with new techniques and procedures—putting what they are learning into practice.

## Deformity Correction

Dr. Richard Gellman leads a course on correcting bone deformities, teaching SIGN Surgeons how to care for patients with disfigured limbs.

## Pelvic Fractures

Many SIGN Surgeons have become experts in specific areas of orthopaedic surgery, such as Dr. Sami Hailu in pelvic fracture surgery. He shares his knowledge and experience by leading a discussion about pelvic fractures.

## SIGN Equipment

SIGN Surgeons work together using SIGN Equipment and simulated bones. The surgeons, who hail from 30 different countries, teach each other techniques for effective and efficient SIGN Surgery.

SIGN FRACTURE CARE INTERNATIONAL

451 Hills Street, Suite B
Richland, WA 99354
P: 509.371.1107
F: 509.371.1316
signfracturecare.org
info@signfracturecare.org

## June 2019 Newsletter

Yes! ☐I want to help with a scholarship!
- ☐Travel Scholarship $2,000
- ☐Full Conference Scholarship $800
- ☐1-Day Scholarship $200
- ☐Other Amount $_____

Yes! ☐I want to give a gift to the general fund for healing. $_____

Name (Please Print): _____

Address**: _____

_____

Phone:(_____)_____-_____ I am a member of Kiwanis ☐

Email: _____

☐ I would like to make this gift in:
☐Honor ☐Memory of _____

_____

Please send a personalized card to:

_____

Address: _____

_____

Payment Method:
☐Check enclosed (payable to "SIGN")
Charge my: ☐VISA ☐MasterCard
☐American Express ☐Discover Card

_____
Credit Card Number

Expiration Date _____

_____
Signature

**Must have full address if credit card is used**

# Thank you!

**Your donations of OVER $45,000 started 2 new SIGN Programs!**

## SIGN 2-day give BIGGER

## Save the Date

September 11-14

**2019 SIGN INTERNATIONAL ORTHOPAEDIC CONFERENCE**

Richland, WA


**Contact SIGN**

P: (509) 371-1107
F: (509) 371-1316
info@signfracturecare.org
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2018 GOLD · TRANSPARENT · 2018 TOP-RATED NONPROFIT · CHARITY NAVIGATOR Four Star Charity


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# Save the Dates

## SIGN Open House

**July 17, 2019**
**4:30 - 6:30pm**

20th Anniversary Celebration Displays

20th SIGN Anniversary
1999-2019

## WINE & DINE for SIGN

**September 21, Portland, OR**
Portland Art Museum

**October 12, Tri-Cities, WA**
Three Rivers Convention Center

## ATTENTION TO PEDIATRICS ORTHOPAEDICS:

Children are special in many ways. Very true in Orthopedics. Kids suffer from trauma, acquired and congenital problems. Great Club-foot clinics are run in our nation. CURE Hospital does a lot of teaching, service and research activities in collaboration with all of us. We than them.

Half of our population is pediatric, so giving attention to this age group is mandatory.

Dr. Berhanu Ayana also completed a one-year fellowship in CMC Vellore, INDIA. Addition of Drs Leul Merid and Nardos Worku is an asset. Fellows are abroad doing fellowships in Ortho Oncology, Sports Orthopaedics and soon on Spine. This is the ways forward to avoid unnecessary referrals for surgery abroad.

# ACTIVITIES IN THE ORTHOPEDIC SPECIALITY TRAINING DEPARTMENTS

**1. Mekelle University- Ayder Referral Hospital**

**Post Graduate Program in MU-Orthopedics and Trauma Surgery**

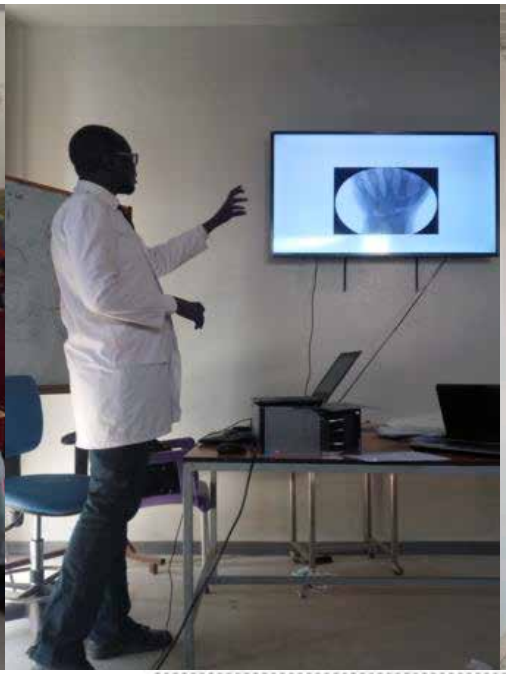
Post Graduate Program in MU-Orthopedics and Trauma Surgery

- MU-Orthopedics and Trauma Surgery Department started the post graduate program in Septem ber 2009 e.c. and now the department has twenty residents out of which eight R3, five R2 and sev en R1 and for 2011 e.c. the department has different activities in two hospitals such as :
  - Ayder comprehensive specialized hospital (ACSH)
  - Mekelle general hospital(MGH)

o Duty activities every day in the two hospitals
o Morning meeting four times a week in each hospitals
o Teaching rounds two times a week in each hospitals
o Seminars once per week for all residents
o Orthopedic-Radiology Session every two weeks
o Basic science seminars for R1 residents three times a week
o OR activities
  - four OR table in ACSH per week and
  - two OR table in MGH per week

o Most hectic Outpatient opd
  - Two times per week in ACSH
  - SIGN clinic once per week in ACSH
  - This year in ACSH the department has started two additional out patient opd for new patients.
  - Once per week in MGH

o Club foot clinic once per week in MGH
  - All this activities are doing by three seniors and the department is also planning to send one its staff member for fellowship in Arthroplasty and Trauma care.
  - The department staff members attended training in Arthroplasty, Arthroscope, and deformity cor rec tion in Addis Ababa this year.



## 2. Story to share… Hawassa experience of Building a New Orthopedic set Up The dream of young graduating orthopedic surgeons

Back in December 2015, when my postgraduate batch was ready to take the exit exam, I had a clear plan how to proceed in my professional carrier. I shared my vision to my dearest friend from my batch, Dr Mamo Deksisa and we agreed to make our shared vision a reality regardless of the shortcomings. Fortunately we had a guest from the UK, Dr Antony Clayson, "Dady Tony", to listen to our inspiring story. He redefined our unfinished idea of setting up a new orthopedic center in Hawassa University Comprehensive Specialized Hospital.

A week after the exit exam, we took a bus trip down to the south and reached right the capital of SNNPR, Hawassa, with a big, of course a very big dream of setting up a new orthopedic center from scratch. Our friendly General Surgeons, led by the then department Head Dr Malede Mersha, welcomed us with the usual Ethiopian hospitality. They were keen enough to share operating table and time and few beds from the general surgery inpatient ward.

I still have a fresh memory of all the hustles and difficult negotiations we had to go through to secure some basic equipment for the startup. We bought four Bosch carpenter drills and made sure that the left over K-wires collected from Cure Children's hospital were reused. We operated our first patient of Humeral shaft fracture following a donkey bite injury with the only Ex-fix we could find from the hospital store.

Our first ever first year surgical resident started attaching with us while we had no patients in a formal ward or clinic, but we kept running to match the puzzling demand. I invested all of my time to write emails and letters to the possible proposed donors and partners and responses were flying back sooner than expected. Letters to Regional Health Bureau and Ministry of Health were delivered along with physical presence to make weight to our demands and surprisingly enough we got some basic equipments in their stores that can be used right away.

Just three weeks in to this challenging journey, a new chapter unfolded. On the day we were having lunch and an unusual movement of the chair we sat on was followed by our messy physical reaction which ended up with our lunch plate on Dr Mamo's face. It was a frightening earth quack in the rift valley region involving our city Hawassa. It lasted only few seconds but we still have many memories to laugh at.

The accident was a blessing in disguise, whereby we were flooded with 150 casualties and most of them being our university students. This was a turning point to our service. We convinced our college management to clear out some store rooms to keep the students on mattress. Luckily, most of them were managed at our set-up while only two were referred to Black lion Hospital.

Few weeks after securing by then the stores, the currently full fledged orthopedics ward, we got the already promised patient beds from the Australian Doctors for Africa and hence it was the time I learned that shipment by sea was slower than a turtles walk. The kind Donation of ADFA involved many Stretchers, Wheelchairs, Trolleys, Walkers, Crunches & Most importantly Portable X-ray Machine and C-Arm .

Once the infrastructure development was on the right tract, we were highly committed to develop the Human capital. It was terribly difficult to negotiate for an exclusive orthopedic ward and OR nurse team but we won the race and Our team was recruited diligently and we personally engaged ourselves in training the nurses on basic ORP skills. It was our duty to pack the instruments for sterilization and also the cleaning task after surgery was also something we shared happily. Later Our nurses were trained with the standard AOA ORP courses and expert nurse Eyerusalem Amanu stayed a month guiding the nursing team for higher caliber. Ward nurses were also trained on basic wound care by Australian nurses on demand and all the effort to capacitate the human element proved to be the perfect plan executed.

The outpatient department was the area not to be undermined and nurses and surgical residents were trained and it was worth the effort to line up to. Different paper formats were developed to be used in the clinical service provision points including OPD.

Currently we own two exclusive orthopedic clinics running five days a week along with one dedicated procedure room designed to fit our demand.

In their respective orders, all the donations we requested from partners arrived safely to Hawassa and we performed a lot of trauma surgeries, thanks to our partners. One thing to mention here is, don't try to collect all your eggs from the same basket. We got different equipments and supplies from different partners who already signed memorandum of understanding with our institution. In the process we learned ways for our custom clearance process and this is when we gained a life time experience. SIGN equipments were donated and our database shows surgeries were done over a period of 3 years. Team of North Western orthopedic alliance for Africa (NOTAA) have been regularly visiting our setup in reverse fellowship program and physiotherapy experts have been included in the team to train our nurses on basic physiotherapy techniques. This is a very good new challenge to our nurses and expanded their scope of practice, which was motivational.

AOA has supported us in capacity building by training our faculty surgeons in different international courses. Claude Martin and his team have done a lot of promotion on our work and this was covered in November 2018 newsletter. Our OR nurses have been fully trained on ORP and the most seniors, 4 in number, had a mini fellowship opportunity in Malawi and Ghana. Our trauma registry country initiative idea is well appreciated by the MOH and AOA and we are on the way to kick off.

ADFA has built a new one store complex which comprises of pediatric orthopedic ward for 24 children, three offices, one morning session room, two OPD's and one procedure room. It was inaugurated on March 23, 2019 in the presence of Mr Ayano Beraso and our university president and Mr Peter Doyle Australian Ambassador to Ethiopia.

Three and half years may seem very young experience but I honestly feel that it was a cause to live for long-term and we have made very big strides in our walk. I really encourage young surgeons to realize their dream of building a new independent orthopedic and trauma center of their own identity. I am highly grateful to my friends and colleagues who shared my vision in their order :- Dr Mamo Deksisa, Dr Biruh Wubishet, Dr Yared Solomon, Dr Samson Tule,

Dr Sintayehu Bussa and Dr Mengistu G/ Yohannes

My Personal Messages to share for graduating surgeons who are planning to start a new orthopedic setup.

- Make a plan ahead of your graduation and have a clear idea of milestones to achieve.
- Contacts your respected hospital management team ahead of graduation and present your demand beforehand on paper.
- Try to move your ambitious dream in stepwise manner and celebrate your small successes with your team.
- Try to sell your plan to nearby colleagues specially your nurse team so as to keep them interested.
- Make sure you get a partner to work with. The partnership should not be limited only to donation; rather mentorship, reverse fellowship and all possible experience sharing shall take a big share of the partnership merit.
- Check your emails on daily bases and respond to your partners ASAP and keep your partners posted on your updates.
- Your human capital is your biggest asset so make your team spirit a priority to work on. Allocate some time to meet up with your nursing team.
- Show your success stories possibly on community forums
- Make a balance between your public and private working time. This is a delicate life line to test your ambition but there are always ways to find the right balance.
- Motivate yourself on academic achievements by participating on conferences especially international ones which will take your vision to a better level.
- Keep your team on their toes when it comes to change.
- Keep your team incentivized for the right manner and doings.
- Update your institution management team on your work and it is worth trying to get an attention and convince the management with numerical data presentation
- Never depend on donations for your long term

plan, make sure your hospital management has some work to do regarding purchase requests.

- Keep yourself motivated to go extra mile to know the purchase process
- Adopt well to custom clearance issues and share some experience before hand.
- Show your success stories possibly on community forums


3. GOOD NEWS FROM St paul's Hospital Millennium Medical College (AaBET)

Department of Orthopaedics & Traumatology at SPHMMC is the second of its kind in Ethiopia.

The first candidates will graduate in few weeks. Exciting!

SPHMMC, in collaboration with University of Kansas, USA, is also moving forward to open an Orthopaedic Trauma Fellowship program of 2 years' duration. Addition of Drs Ebrahim Ahmed and Milkias Tsehaye, after completing their one-year Sub-specialty training in Ganga, INDIA will make this effort a reality. Welcome!

4. **EAST ETHIOPIA ORTHOPEDIC ACTIVITY-NEWS AND UPDATES**

"Hiwot-Fana" Specialized University Hospital is one of the governmental Hospitals in the Eastern Ethiopia which is under Haremaya University. The Orthopedic unit in this Hospital has been established since five years back and is providing an immense service to the society around Eastern Ethiopia.

As of last year, due to diligent effort of the Orthopedic Surgeons and the higher management, it was possible to have all the required Orthopedic implants and instrument which help in providing full Orthopedic service to the society in need.

Currently there are three Orthopedic Surgeons, all gradated from Addis Ababa University, BlackLion Hospital (Dr. Moa Chali, Dr. Bruh Kefale and Dr. Tekalign Tsegaye). They are providing 'full range' Orthopedic care to the society and with affiliation of Addis Ababa University, department of Orthopedics and the fund earned from AOAF, it is selected as one of the detachment sites for orthopedic residents!

Jugal Hospital is also the other near by Hospital in Harar which is also providing Orthopedic care to the society, currently with the fund obtained from Australian Doctors for Africa (ADFA), the operating room has been

re renovated and all the required instruments including additional C-ARM. With already available brand new C-ARM in the Hospital, it is possible to equip both Hospitals with C-ARMs after discussion with the health bureau and provide the standard of care for patients in need. We shall be enjoying two image intensifiers!

Our immediate vision is to give best Orthopaedic care to our community in the East and also open Orthopaedic Residency program very soon. Thank you. Dr. Moa Chali is reporting.

**5. AAU, CHS, School of Medicine, Mother Department of Orthopedics**

**International Orthopedic Surgeons who visited AAU CHS, Orthopedics department since last ESOT AGM**

| Nº | Dates | Main Activities of Visitor/s | Remark |
|---|---|---|---|
| 1 | July 10 &11, 2018 | ESOT 13th AGM, Guests Speak at the Conference | successful |
| 2 | Oct 7-14,2018 | Tumor lecture and procedures, UK and Australian Team (ADFA) | Successful |
| 3 | Nov 2-17,20118 | THR with Dr. Alexis(SAO) and Zimmer, USA | Successful |
| 4 | Nov 5-9,2018 | Adult limp reconstruction course(UK, Vienna USA----)John H. | Successful |
| 5 | Nov 5-9,2018 | Training for orthopedic OR Nurses …..(UK –team) | Successful |
| 6 | Nov 12-16,2018 | Spine course(UK) | Successful |
| 7 | Nov 19-23,2018 | Pediatric lectures with Dr. Sally(UK) | Successful |
| 8 | Nov 21-28,2018 | Pediatric course with Dr. Vershia (CMC, Vellore, INDIA) | Successful |
| 9 | Dec 17, 2018 | Dr. Tony Clayson ( WOC-UK): External Examiner | Successful |
| 10 | Jan 1&2,19 2019 | Dr. Ruben G, Cleveland, USA | Successful |
| 11 | Jan 19-Feb 4,2019 | Dr. Loch Trimingham ,Hannah ,Cynthia | Successful |
| 12 | Jan 24,2019 | Dr. Eric C Gokcen, Foot and Ankle lecture, Temple University Director of foot and ankle surgery | Successful |
| 13 | Feb 23-28,2019 | Dr. Lewis Zirkle ,Dr Molly Zirkle with their Team ( 5th Ethio-SIGN Conference) | Postponed |
| 14 | Feb 27 March 1-19,2019 | Principles & foot & ankle surgery course BOFAS. | Successful |
| 15 | March 17-19,2019 | ORP course for Ortho OR Nurses by AOAF. | Successful |
| 16 | March 20-22,2019 | Orthopedic pre Basic course for all RI residents with ADFA | Successful |
| 17 | March 25-29,2019 | Basic AO course for all senior residents, AOAF | Successful |
| 18 | March 25-29,2019 | Dr. Neil, Mr Rupert Eckersley, Orthopaedic Hand surgeon from London and Mr. Henk Giele,David Plastic Hand surgeon from John's Hopkins university | Successful |
| 19 | March 29, 2019 | Dr. Tony Clayson and Dr. Kohila S( Yearly Orthopaedic REDIENTS RESEARCH DAY in Hawassa) | Successful |
| 20 | April 05 & 06 /19 | Dr. scott H. Kozin & Dr. Duretti, New York .Flaps and nerve repair course | Successful |
| 21 | May 8-9/2019 | Sports injuries and Arthroscopy Senior CME and Hands on /Surgeries ,STORZ | Successful |
| 22 | May 15,2019 | Vascular skill workshop for R3 Residents (ADFA) | Successful |

**A. 100 Orthopaedic Residents** 32 years young !

This years marked the mother orthopaedic Department in AAU to have 100 orthopaedic residents ! the hig hest number may in the whole world.

Thanks to our in-country and international collaborators, we train these all. 25 will graduate in few weeks. The mother ortho Department at Black Lion AAU Produced many specialists in its Journey of 32 year . Congradulation ! Mother is always our Mother!


**B. 5th Ethio-SIGN Conference**

Prepared by the mother Department, it was a challenge because Dr. Zirkle couldn't come physcially. He virtually addressed & lecturally the audience using video conference . We made it !

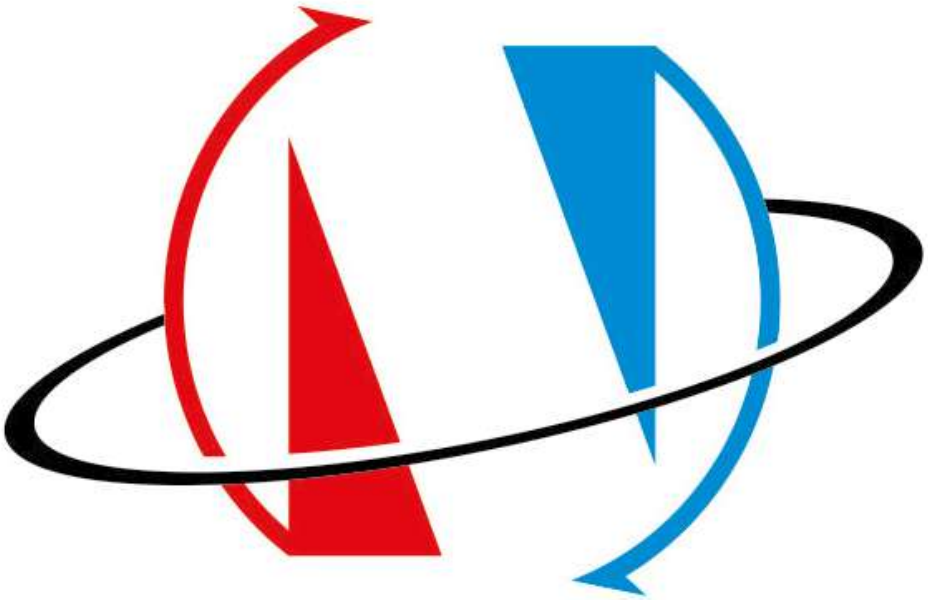
Inaguration CME on completed physical disability rating software was also given by Dr.Biruk L; Dr. Shumte G. (State Minster of Innovation & Technology) and Dr. Dawit W. CEO of CHS blessed our event.

**C. Deformity Correction.**

**D. Arthroscopy courses were outstanding.**

BR LIFE

**E.WOC-UK** is committed to send senior external examiner and also help in harmonizing Qualitying exams in all ortho Departments in Ethiopia. we thank Dr.Tony Clayson



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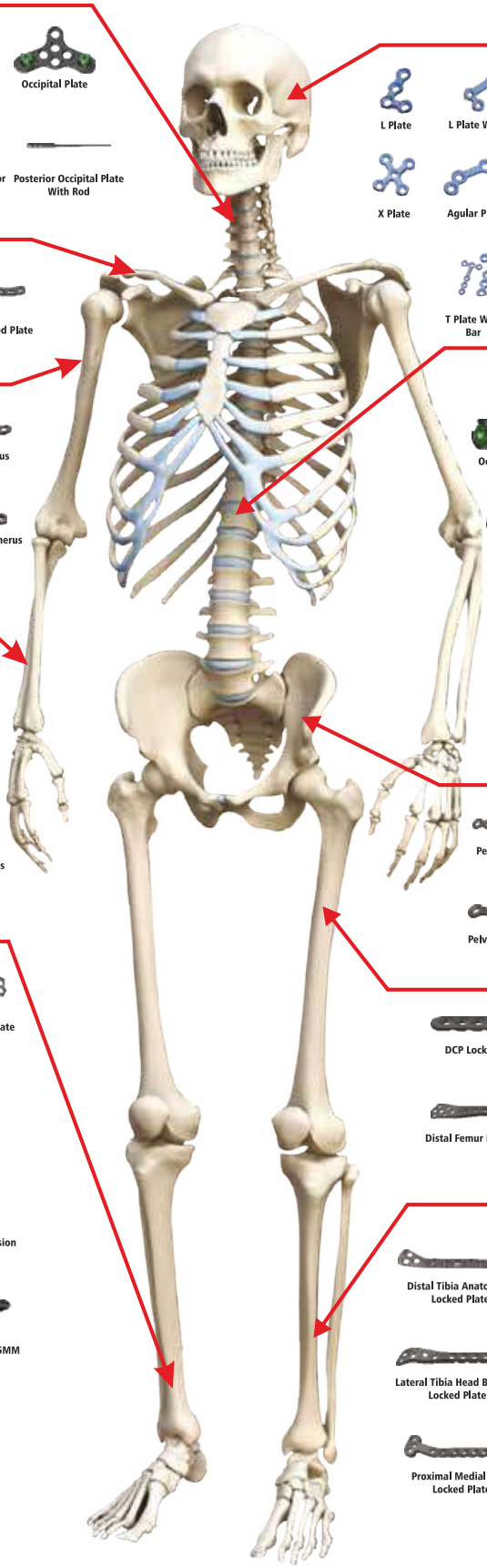

## CERVICAL

- Occipital Poly Axial Screw
- Cervical Plate
- Cervical Screw
- Occipital Screw
- Occipital Plate
- Anterior Cervical Fusion Plate
- Laminar Hook
- Transverse Connector Rod
- Transverse Connector Hook
- Posterior Occipital Plate With Rod

## CLAVICLE

- Clavicle Superior Anterior Distal Locked Plate
- Clavicle Locked Plate
- Clavicle Hook Locked Plate

## HUMERUS

- Proximal Humerus Multipal Lock Plate
- Anatomical Proximal Humerus Locked Plate
- Distal Medial Humerus Locked Plate
- Olecranon Locked Plate
- Anatomical Distal Humerus Locked Plate
- Extra Articular Distal Humerus Locked Plate

## RADIUS / ULNA

- Dorsal Distal Radius Straight Locked Plate
- Dorsal Distal Radius Right Angled L-locked Plate
- Distal Radius Locked Plate
- Distal Radius Anatomical Locked Plate
- Dorsal Distal Radius L - Locked Plate
- Connecting Distal Radius Locked Plate
- Dorsal Distal Radius Oblique L - Locked Plate
- Dorsal Distal Radius T Locked Plate
- Volar Articular Distal Radius Locked Plate

## FOOT & ANKLE

- 3D Locked Plate
- Broad Straight Locked Plate
- Calcaneus Locked Plate
- Calcaneus Standarad Locked Plate
- Cuved Locked Plate
- H - Locked Plate
- L - Locked Plate
- Oblique T - Locked Plate
- Rectangular Compression Locked PLate
- T - Locked Plate
- Non - Locked Screw 2.7MM
- Non - Locked Screw 3.5MM
- Locked Screw 3.5MM
- Locked Screw 2.7MM
- Washer

## MAXILLOFACIAL

- L Plate
- L Plate With Bar
- Z Plate
- Y Plate (Small & Big)
- Double Y Plate
- X Plate
- Agular Plate
- Nose Plate Y Shape
- Mini Bone Plate Continuous Hole
- Mini Bone Plate With Bar
- T Plate With Bar
- Orbital Plate Continuous Holes
- Nose Plate H Shape
- Emergency Screw Cros Slot Head

## SPINE

- Occipital Mono Axial Screw
- Occipital Poly Axial Screw
- PLIF Cage
- TLIF Cage
- Wedge Shape Cage
- Expandable Cage
- Mesh Cage
- Auto Pre Stress transverse Connector
- MIS Pedical Screw Mono Axial
- MIS Pedical Screw Poly Axial
- Inner Nut MIS
- Staple

## PELVIC

- Pelvic Straight Locked Plate
- Pelvic Curved Locked Plate
- Pelvic Symphysis Locked Plate
- Pelvic Flex Locked Plate
- Acetabular Surface Plate

## FEMUR

- DCP Locked Plate
- DHS Locked Plate
- Proximal Femur Locked Plate
- Distal Femur Locked Plate
- Trochantric Femur Locked Plate
- DCS Plate

## TIBIA / FIBULA

- Distal Tibia Anatomical Locked Plate
- Distal Medial Tibia Locked Plate
- Antero Lateral Distal Tibia Locked Plate
- Lateral Tibia Head Buttress Locked Plate
- Low Profile Proximal Lateral Tibia Locked Plate
- Proximal Tibia Osteotomy Locked Plate
- Proximal Medial Tibia Locked Plate
- Posterior Medial Proximal Tibia Locked Plate


100 Specializing Orthopaedic Residents Dec . 2018
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