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ETHIOPIAN SOCIETY OF ORTHOPEDICS & TRAUMATOLOGY



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ESOT's Year book- V

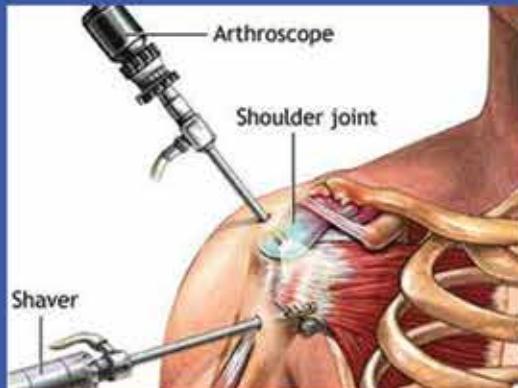
2015

EOJ Vol. 5

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11th ANNUAL GENERAL MEETING

Scientific Conference and Medical Exhibition



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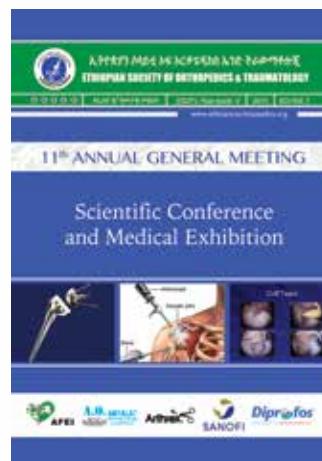
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Our Jurnal



Presidential Address

Biruk L. WAMISHO, M.D, FCS

Presidential Address

Guest of honor from FDRE; Main Speaker;

Dear member Surgeons, International speakers, Residents, Med Students, Sponsors and Invited guests of ESOT;

I humbly welcome you all to this wonderfully prepared 11th national annual general meeting and scientific conference of the Ethiopian Society of Orthopedics and Traumatology (ESOT). Welcome!

Before last year, we focused on **Transport Injuries** and it was honor to have the presence of the Minister of Transport, H. E. Ato Workeneh Gebeyehu and we celebrated our 10th year Anniversary with the Federal marsh band among us.

Last year, again we were honored to have the presence of Authorities from the Ministry of Construction and the Ethiopian Parliament amongst us.

Following our October meeting, the ESOT-EC and the Organizing committee has been looking for a better conference time. All is now well prepared and I thank my friends.

The main theme this year is "**Modern management of common Orthopedic Shoulder Problems**". We will thoroughly and scientifically explore the one of our big joints-the Shoulder!

This year, we are blessed to have **our own Dr. Reuben GebreChristos Gobezie** as a main speaker. He is one of the top 25 best shoulders and elbow Sub-specialists in the USA.

<http://clevelandshoulder.com/about-us/>

Dear Colleagues, Partners and Guests;

This year's shining event is made possible thanks to our respected main Partners:

Dear members;

This morning, please allow me to partly introduce you to Dr. Reuben Gobezie. Please also allow me to thank Arthrex in USA and Abyalat Orthopedic Implants PLC in Ethiopia for arranging Dr. Reuben's trip. I am sure this visionary friend will aspire our young Residents! Dr. Reuben is very industrious and has an exemplary orthopedic- industry relationships.

Thank you Reuben for sharing your valuable time with us in Addis!

All ESOT members must attend the entire meeting so that they get full CME credit hours.

As usual we will have audit report and some discussion .Lunch and special break meal is well prepared and will be served here at a five star International Hotel. Please socialize. Meet old friends and get new friends. Take time and talk to exhibitors, look into products and markets. ESOT is yours! This is your society and it is our national private time!

Once again, I thank you all for coming and enjoy the conference, enjoy Ethiopia!

With best regards,

Biruk L. WAMISHO, M.D, FCS

President, ESOT



Dr Geletaw Tessema

First of all, I would like to congratulate all ESOT members on this year annual scientific celebration.

I thank ESOT for inviting me to express and write my message on our magazine.

As most of you know I became head of the department soon after graduation! - It is a huge responsibility to lead the department but it has become a great pleasure for me and I thank the staff members for electing me confidently. I thank all who congratulated me and wished me for the best. I will be committed for the betterment of the department together with you.

Our department is working with extensive programs with the limited resource and human power. Despite this we are striving in away to make the department center of excellence and also to different sub specialization soon. Currently the number of our residents is increasing year after year and we have a total 60, competent enough residents at this time. All are great assets for the nation of Ethiopia! This is one of the strengths and it opens a new era in orthopedic practice in Ethiopia. I know there are a lot of obstacles in our practice at this time in several hospitals. But I am sure it will be solved soon and we shall see a bright future!

The good relation we have with orthopedic hospitals like Soddo Christian hospital, Cure children's hospital, Wolisso Hospital and government Hospitals in Addis is making a significant change on our residents skills and knowledge. And I appreciate your interest to work with us in harmony. And definitely our relation will proceed even more.

Direct and sustainer regular support from international groups (SIGN and ADFA for example) is also fundamental for our department sustainable activities. Even though there were some gap in communications, we are trying to correct it and take our relation to a new chapter.

Finally, as executive member and secretary of ESOT, I call all members to work together for the development of orthopedic and trauma practice in the country. I know we all worked hard to our best so that this year's AGM becomes astonishing. ESOT is our common scientific forum. It is ours! Enjoy. Thank you



A LITTLE BIT ABOUT THIS YEAR'S MAIN ESOT INTERNATIONAL SPEAKER:

He left Ethiopia at age of 4 with his father, who was a Medical doctor in Zewditu Hospital.

Then went to John's Hopkins complete Undergraduate Medical School; did both orthopedic residency and Fellowship in Harvard.

He and his family love Ethiopia!

He is a world renowned Orthopedic Surgeon practicing in Cleveland, USA. As the Chief Shoulder & Elbow Surgeon of University Hospitals and Director of the Cleveland Shoulder Institute, Reuben Gobezie, M.D., is a nationally recognized orthopedic surgeon and innovator in shoulder surgery in the United States. Dr. Gobezie, a graduate of Harvard Medical School, has been ranked as one of the top 25 shoulder specialists in the US. Dr. Gobezie has made pioneering contributions to the areas of minimally invasive and arthroscopic shoulder replacement surgery, cartilage transplantation for the treatment of young patients with arthritis, and biceps surgery. He also serves as head team physician for Gilmour Academy University School. He is an official team physician/ *Official Partner for the "Lake Erie Monsters"* - ice hockey team in the American Hockey League.

He lectures on his work both in the United States and Europe regularly. Dr. Gobezie is a five-time Patient's Choice award winner, an honor bestowed on less than 1% of physicians nationally, and the result of on-line patient ratings of their medical care. He has over **54** world-standard Medline listed publications and also won many research awards.

He runs one of the best Orthopedic Sub-specialty fellowship programs at Cleveland Shoulder Institute in the USA:
<http://clevelandshoulder.com/about-us/>

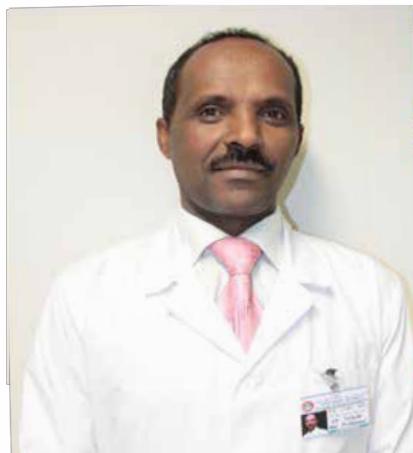
About this fantastic achiever; who left Ethiopia when he was a 4 year old boy, please read further from the link below.

We are sure our young enthusiastic surgeons will be stimulated and follow him as a model.

<http://www.uhhospitals.org/find-a-doctor/gobezie-reuben-13282>

Reuben, many thanks for coming to Ethiopia, your home;
ESOT -EC.

Limb amputation in Paediatric age group at 'Tikur Anbesa' Specialized Hospital



Seid M yasin (MD), Orthopaedic Resident

**Birhanu Ayana (MD),
Assistant professor of orthopaedic surgery**

ABSTRACT

Background: Limb amputation is a serious but usually preventable public health problem that is often associated with profound social, psychological and economic impacts on the patient and family. There is few published data on amputation in Ethiopia and reports on causes of amputation in children are none existent. The objective of this study was to determine the cause and patterns of limb amputation in paediatric age group at black lion specialized hospital.

Methods: A retrospective study of medical records of all paediatric patients who underwent limb amputations at 'Tikur Anbessa' Specialized teaching hospital between May 2012 and April 2015 were analyzed. Information regarding age, sex, indications, level of amputation were studied.

Results: 25 limb amputations were performed in twenty two patients, with 3 amputations (bilateral lower limb amputations and left upper limb amputation) in one patient and bilateral BKA in another one. **Eleven (11/25=44%)** of these were due to gangrene secondary to traditional bone setter ("Wogesha" in Amharic) treatment, Six due to malignancy, five due to severe trauma and three limb amputations (in one patient) due to vasculitis.

Conclusions: Trauma with irreversible vascular damage following tight splinting, malignancy and severe trauma are the leading indication for major limb amputation in paediatric age group. "Wogesha" practice poses treat to child's limb and health policy makers in our country have to review this practice.

These are potentially preventable through provision of health education, "Wogesha" training and regulation and early presentation to health institution.

Keywords: limb amputation, paediatric, patterns of amputation, gangrene, "Wogesha"-Bone setter

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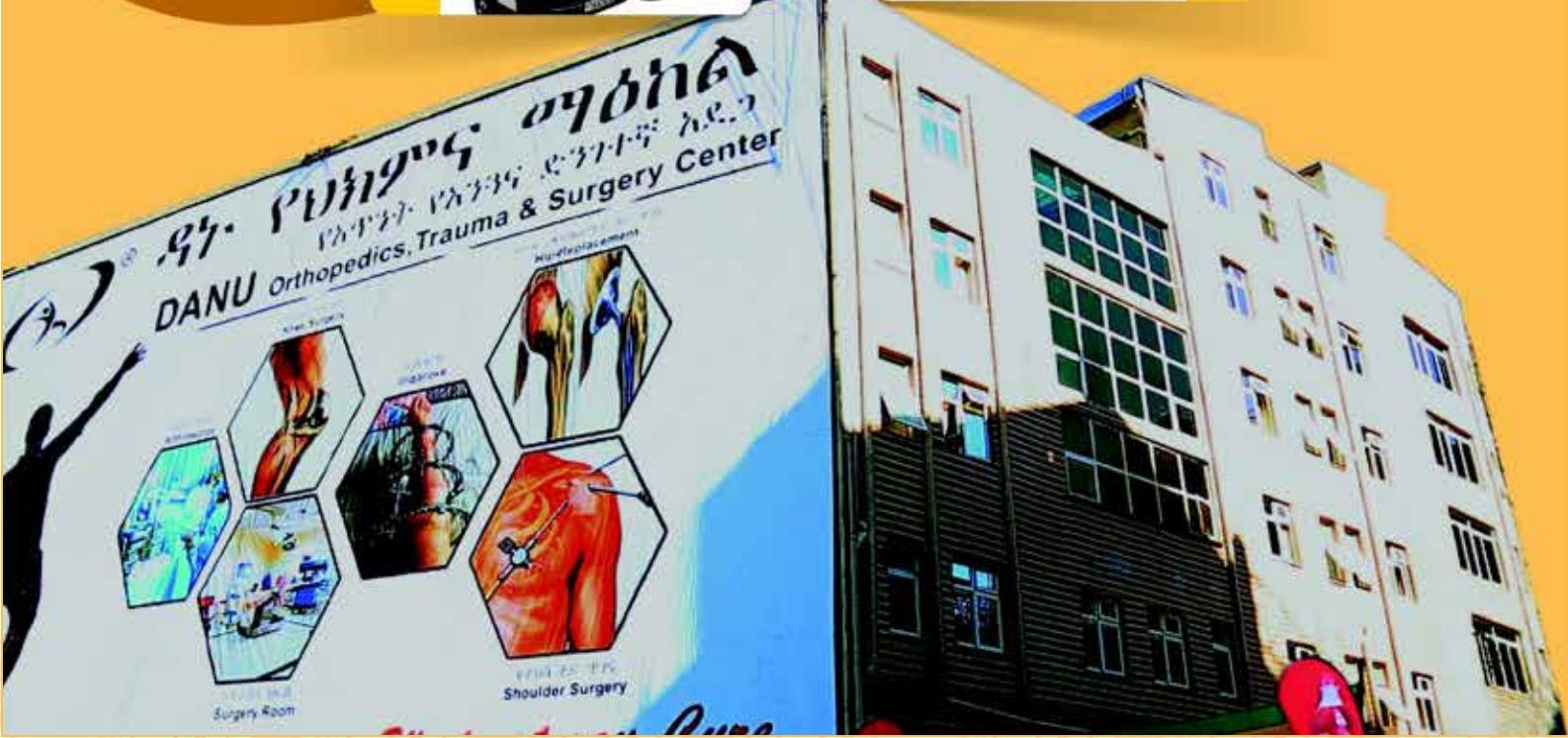
OR Room



Pharmacy and
Ambulance service



Physiotherapy





ወንድ ወይስ...??

By Seid M./ በይ/ር ስይድ መሆመድ

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የወንጀዎች "ፍትህነት"

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ՈԼՄՊԸՆՄՊՄ: ՍԱՀՄՊ ՔՐԴԵՆ ԸԵԱԼԸ ՈՒՄՆԴ
ՄՊԿԸ ՄՊՐՄ ՀՅԴՄՊՀԸ ՔՎՆԸ ԴԻԿ-
ՔԵՐԸՆՄՓՄ: ՀԾԾ ՈՄՊՄ ԴՎՆ "օՎՓԿ" ՀԲ ՈՄՊՄ
ՈՒ ՖԸՆԴ ԱԾՄ-ԱԸ ՈՄՊԿՄ ԻՎԸՆՐՄՊՄ ՄՎՍ
ՈՒՔԸ ՔՊԿԱԴՆ ՔԸ ԱԾՄ-ԱԸ ՀՅԴՄՊՀԸ ՔՎՆԸ

ՀԱՅՀՅՆԻ (ՀԱՅՀՅՆ ՔԱՐԴՆԻ ՍԻԼՊԻԴԻ ԸՆԹԱՅ) ՈՍԽԱՇԻ
ՔԱՂՋ ՔԱՐԴՆԻ ՍԻԼՊԻ ՈՒԵ՛ՆՆՈՒ ՍԻԼՊԻ ԻԳՐԱՇԻ
ՀԱՐՀՆ ԻՊԹՈՒ Մ-ՈՒ ՈՄՊՈՂՈՒՇ: ՈՒԵ՛ՆՆՈՒՔԻ
ՀՈՒՇՎՈՅ ՀԱՅՀՅՆ ՀԱՐՀՆԻ ԻՆԸ ՄՈՒՏ ԻՈՒՅԻ
ՔԱՐԴՆԻ ԱՍԾԵՎՇԻՆ ՀՐԱԿ ՔՊՆՔՆԱԿ ՈՄՄՒԿԴԻ
ՄՈՒՇՎՈՒ ՀՈՒՅՄ ՀԱՄՄ-Մ ՈՒԵ՛ՆՆ ՄՈՒՅ ՓԱԸ ՓԱԼՅՆ
ՀՅԱՆ ՈՄԾՈՒՇ Ո.ՔՊԻ ԴՐ ՀԱՅԾՄՆ ՔՈՂԱՌ: ԱՊԾՈՒ
ՀԱՅՏՔԸ ՀՅՈՒ ՄՈՒԵՇՆ ՊԼ ՔՈԵ՛ՆՆՈՒ ՈՄԾՈՒՅՇ
Մ-ՈՒ ՈՒԽԿ աԶԴ ՔԱՂՋ ՔԱԿԻՊ ԾՈՎ ՀԱՅՏՔԸ ՈՉԻՇ
ԻՄՄՍԻ ՔԻՆ ԻՔՆՈՒՇ ԶՆԾՈՒ ՀԲՆ ՍԻԼՊԻ Վ-Ը
ԼԱՐԻ ՔԱՐԴՆԻ ՓՔՐԻԿ ԱԼԱՊԱՐՔԻՇ ԼԱՄՊՈՒՇ ՎԾԿ
ՔՊՆՊՈՒՓ ՔԱԿԻՊ ՄՈՒՅ ՀԾՈ ՈՉԻՇ ԿՄ: ՈԼԻՄՊՈՒ
ՀՅՈՒ ՏՄՊՈՂՈ ՔՊՆՊՈՒՓ ՔԻՊ ՀՉՈ ԶԾԸ ՀԾԸ
ՀՈՒՄՊՈՒ ՀԿՊ ՔԼ ՀԱ ԼՄՊՈՒՓ ԵՐԵՋԱ: ԼԻՄ ԿՎ-
ՄՈՒՇՎՈՒ ՓԱԸ ՓԱԼՅՆ ՀՅԱՆ Ո.ՔՊԻԿ ՄԾԿԻՄ ԿՎ-
ՀՈՒՄՊՈՒ ՔԻՆ ԱՆ ՊԴ ՀԿԻՄ ՈՐԾՈՒՄ: ՀԵ

ለሁክመ ካመለክ ወጪ ቁጥጥቃው እምነት የሆነ ጉዳቶ፡
ከተማቃቃው ጉዳታቃው እና የሚያመዘን በመሆኑ ይቻል
ለወገኖች ይገባል በይናኝ፡፡

ከርከራም ይቀጥላል፡ የጠራራ ሰህይ ማቻራት መቻወቻም
ወጠምናወቻ አርራጥቶውን ይቀጥላለ፡ ህይወት ማን አገዥ
አይናን የለለባባብ አጥቃ አንድለለው በርከታ የተቀኑ ለለባወቻ
አካባቢት ነው፡፡ ለተቋጠው አካል ያለው ለተጠመመው
መገባበሚያው፡ ለግብኬው ሲሆ እና "ለተዘረጋው" ዘጋጀት
ተጠቃቃው ማን ይሆን? ... እና እና ገዝሮ በእድባባይ
የነጠቀው ወጪ? ... ወጥቶን ወደ መረጃ በመጠራት የተባባት
አመልካከት የጠራረው ማህበረሰብ?... በቁ ካትትልና አርምና
ባለመውሰድ ይህን መሠረት ወጪበደና አንድቀጥል ማረዳቁድ
የፈቀድው መግባት?... ወይስ ልማትዎን አውቃ ለተወስኑ
በማትቻልበት ዓይነ ለይ ለለከርድ ወሰኑው አካልን አንድታጣ
ምክንያት የሆነት የህይወት ወላጊች? ተልቀ የጥቅም ነው፡፡



HAD THIS BEEN DONE BY A DOCTOR, HE ENDS UP IN COURT MAL-PRACTICE IMMEDIATELY! BUT, WHO IS GOING TO BE BLAMED FOR THIS SERIOUS MEDICAL ERROR BY BONE-SETTERS "WOGESHAS"?

THE LAW SHOULD BE UNIFORM. ALL HAVE TO BE ACCOUNTABLE and RESPONSIBLE.

Wrong manipulation without sedation, bamboo tightly applied with plastic lace/band KILLS limbs and patients! Seeing such boys at Hospitals in Ethiopia is a daily routine! It has to STOP!





Biography of Dr Ben Carson By Nardos W.

Ben Carson is one of the most famous and respected doctors in the world. Since the 1980s, his surgeries to separate conjoined twins have made international headlines, and his pioneering techniques have revolutionized the field of neurosurgery. Almost as important is that Carson has become a role model for people of all ages, especially children. Although he works thirteen-hour days and performs hundreds of operations a year, Carson makes time to spread his message that anything in life is possible, regardless of what color a person is or where he is from. Carson speaks from experience. He went from the inner-city streets of Detroit, Michigan, to the halls of Yale University, to director of pediatric neurosurgery at one of the most prestigious hospitals in the United States. In 2004 Carson was awarded the Healthcare Humanitarian Award because he has "enhanced the quality of human lives ... and has influenced the course of history through



According to the US News and World Report article, Carson performs 500 operations a year, three times as many as most neurosurgeons, a fact for which he credits his "very, very efficient staff." He works with the music of Bach, Schubert, and other composers playing, "to keep me calm," he told the magazine. Benjamin Carson was born in Detroit, Michigan. His mother Sonya had dropped out of school in the third grade, and married when she was only 13. When Benjamin Carson was only eight, his parents divorced, and Mrs. Carson was left to raise Benjamin and his older brother Curtis on her own. She worked at two, sometimes three, jobs at a time to provide for her boys.

Benjamin and his brother fell farther and farther behind in school. In fifth grade, Carson was at the bottom of his class. His classmates called him "dummy" and he developed a violent, uncontrollable temper.

When Mrs. Carson saw Benjamin's failing grades, she determined to turn her sons' lives around. She sharply limited the boys' television watching and refused to let them outside to play until they had finished their homework each day. She required them to read two library books a week and to give her written reports on their reading even though, with her own poor education, she could barely read what they had written. Within a few weeks, Carson astonished his classmates by identifying rock samples his teacher had brought to class. He recognized them from one of the books he had read. "It was at that moment that I realized I wasn't stupid," he recalled later. Carson continued to amaze his classmates with his newfound knowledge and within a year he was at the top of his class.

The hunger for knowledge had taken hold of him, and he began to read voraciously on all subjects. He determined to become a physician, and he learned to control the violent temper that still threatened his future. After graduating with honors from his high school, he attended Yale University, where he earned a degree in Psychology. From Yale, he went to the Medical School of the University of Michigan, where his interest shifted from psychiatry to neurosurgery. His excellent hand-eye coordination and three-dimensional reasoning skills made him a superior surgeon. After medical school he became a neurosurgery resident at the world-famous Johns Hopkins Hospital in Baltimore. At age 32, he became the hospital's Director of Pediatric Neurosurgery, a position he would hold for the

next 29 years. In 1987, Carson made medical history with an operation to separate a pair of Siamese twins. The Binder twins were born joined at the back of the head. Operations to separate twins joined in this way had always failed, resulting in the death of one or both of the infants. Carson agreed to undertake the operation. A 70-member surgical team, led by Dr. Carson, worked for 22 hours. At the end, the twins were successfully separated and can now survive independently. Carson's other surgical innovations have included the first intra-uterine procedure to relieve pressure on the brain of a hydrocephalic fetal twin, and a hemispherectomy, in which an infant suffering from uncontrollable seizures has half of its brain removed. This stops the seizures, and the remaining half of the brain actually compensates for the missing hemisphere.

People around the world were intrigued by conjoined twins, and Carson's surgeries generated a lot of press. At first, the soft-spoken doctor was known in the media only as a hospital spokesperson who explained complicated operations in terms that everyone could understand. Eventually, Carson's own story began to pique the interest of the public. Everyone was fascinated that such a "miracle worker" had come from such humble beginnings, and soon Carson became a motivational speaker, much in demand at schools, hospitals, and businesses. He traveled across the United States, explaining that if he was able to overcome such obstacles as poverty and racism, anyone could. On his Web site, Carson outlined what he believes to be the keys to success: "One's ability to discover his or her potential for excellence; the acquisition of knowledge to develop it; and a willingness to help others." The biggest key is education, which according to Carson, "leads to liberation."

In addition, Carson has written several bestselling books (*Gifted Hands: Think Big; The Big Picture: Take the Risk; America the Beautiful: Rediscovering One Nation; You Have a Brain: One Vote and My Life*) that recount his life story and encourage people everywhere to strive for excellence. Because of his unflagging commitment to children and his many medical breakthroughs, Carson has been awarded 38 honorary doctorate degrees and dozens of national merit citations. In 2004 there was even talk of a Hollywood movie that would tell the world more about the man *Ebony* magazine called a "medical superstar."



- In 2000, he received the Award for Greatest Public Service Benefiting the Disadvantaged, an award given out annually by Jefferson Awards.
- In 2001, he was elected by the Library of Congress on the occasion of its 200th anniversary to be one of the 89 who earned the designation Library of Congress Living Legend.
- In 2004, he was appointed to serve on The President's Council on Bioethics.
- In 2005, Dr. Carson was awarded the William E. Simon Prize for Philanthropic Leadership
- In 2006, he received the Spingarn Medal from the NAACP, their highest honor for outstanding achievement.
- In 2008, the White House awarded Carson the Presidential Medal of Freedom, the nation's highest civilian honor.
- In 2008, Ford's Theatre Society awarded Carson the Ford's Theatre Lincoln Medal, for exemplifying the qualities embodied by President Abraham Lincoln—including courage, integrity, tolerance, equality, and creative expression-through superior achievements.
- In 2008, U.S. News & World Report named Dr. Carson as one of "America's Best Leaders".
- In 2010, he was elected into the National Academy of Sciences Institute of Medicine, considered one of the highest honors in the fields of health and medicine.
- In 2012, Carson was the Influential Marylander Award recipient from The Daily Record, Baltimore's legal and business newspaper.
- In 2014, an American poll conducted by Gallup ranked Carson sixth on a list of the most admired men in the world



Carson is a member of the American Academy of Achievement, Alpha Omega Alpha Honor Medical Society and the Horatio Alger Association of Distinguished Americans.

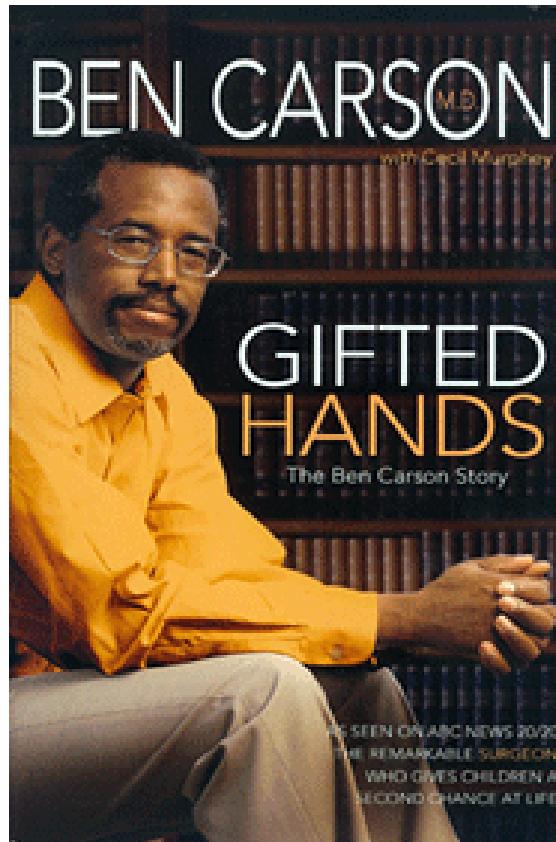
In March 2013, Carson announced he would retire as a surgeon, stating "I'd much rather quit when I'm at the top of my game". His retirement became official on July 1, 2013.

Dr Ben Carson is a medical superstar who overcame poverty, racism, and a violent temper to become a world-renowned neurosurgeon, motivational speaker and author.

Wish him the best in the upcoming 2016 election for USA presidency!

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11th ANNUAL GENERAL MEETING

Scientific Conference & Medical Exhibition
Main Speaker: Dr. Reuben G.; USA

Elilly International Hotel

September 03, 2015

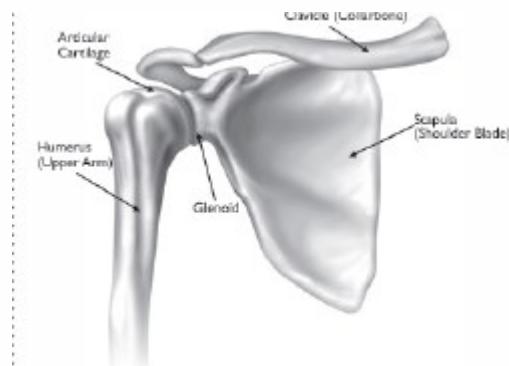




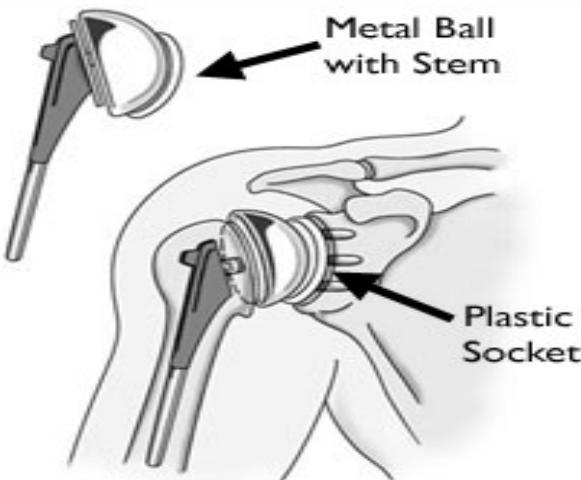
The “New age” shoulder replacement:

Ananya K; M.D

The Glenohumeral joint (a ball & socket joint) is one of the complex joints of the human body. The quite large semi spherical head of the humerus is placed in the concave glenoid. Due to the disproportion between the two surfaces, its stability is mainly maintained by glenoid labrum the capsule, the ligaments and the surrounding muscles including both the dynamic and static stabilizers.



Trauma resulting in three or four quarter fractures of the proximal humerus, fragility fractures which are usually comminuted and displaced with poor implant purchase and long standing arthritic changes of many underlying causes have made orthopedic surgeons to look for ways to help their patients lead a better quality of life following treatments. Over the years ORIF (locking screw technology and fixed-angle plate osteosynthesis) and total/ hemi-arthroplasty were the procedures frequently done. These methods have shown to have grave complications such as humeral head osteonecrosis, loss of fixation, screw penetration, unpredictable functional outcome and have prerequisites to have superior clinical outcomes such as tuberosity healing and intact rotator cuff muscles (as in total/ hemi shoulder replacement).



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1. Lubowitz et al, ACL Femoral Footprint Anatomy: Systematic Review of the 21st Century Literature, Arthroscopy, Vol 28, No 6, 2012: pp 872-881.



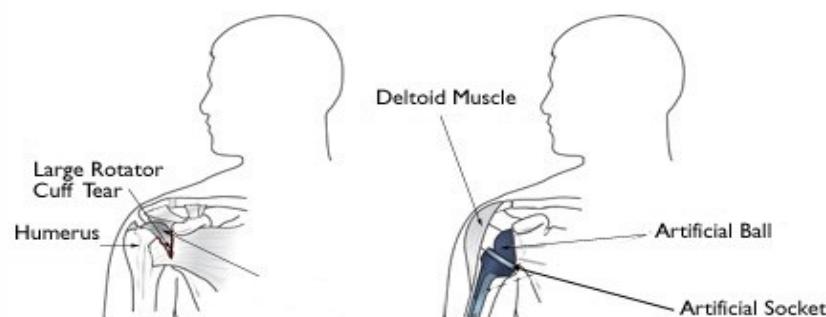
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Reverse shoulder arthroplasty-RSA (which was initially designed to treat rotator cuff tear arthropathy) now is used to treat rotator cuff deficiency, irreparable rotator cuff tears, acute fractures, malunions and non-unions, chronic dislocations and failed arthroplasty.



This method applies the traditional Grammont principles of creating semi constrained prosthesis with a fixed fulcrum by which deltoid can elevate the arm without a functional rotator cuff. Initially it was developed by Paul Grammont. He developed functional surgery applied to rotator cuff tears. The lateralization of the acromion and medialization of the center of rotation of the humeral head: with these two principles he developed the acromio humeral prosthesis but due to implant loosening it was abandoned quickly. Later modifications were made to lateralize the glenosphere center of rotation to prevent scapular notching.

Complications associated with this procedure include scapular notching, glenoid loosening, instability, acromion fracture, nerve traction; pain Sx, peri-prosthetic fracture and infection. Satisfactory results can be obtained if there is careful preoperative planning and attention is given to technical details. There is still the glitch of unknown long term treatment outcomes. In conclusion, this method will become a pillar in the management of complex proximal humeral fractures and the future of shoulder replacement.



CASE REPORT “MIRROR-HAND”.... ULNAR DIMELIA.

By Adisu C, MD, Scott K, MD, Dureti T, MD, Tewodros T, MD, Mamo D, MD

ABSTRACT

Congenital upper limb anomalies are generally common affecting about 22.5 cases per 10,000 live births⁽¹⁾. Ulnar dimelia (“Mirror-hand”) is usually called mirror hand is one of these anomalies occurring very rarely. I report a case of mirror hand that I saw during my attachment at cure international children’s Hospital (Ethiopia).

INTRODUCTION

Ulnar dimelia is an extremely rare upper limb congenital deformity characterized by duplication of ulna, absent radius and symmetrical multiple fingers. Literature suggests there are less than 100 cases reported, indicating its rarity. I describe the patient I encountered as below.

Case presentation

A 2 year old female child was brought to Cure international children’s hospital, Ethiopia by her father with a compliant of left hand deformity and inability to move at her elbow since birth. The child was apparently healthy without other associated congenital abnormality.

She was second for her parents with no similar illness in the family. Her prenatal history was uneventful and delivery was SVD. No history of drug taking by her mother or substance abuse.

On physical examination the left hand contained eight digits which look mirror of each other and located symmetrically around the midline with absent thumb. All the digits can move. Wrist range of movement was normal but elbow flexion and extension and forearm rotation are limited. Otherwise there was no abnormality detected in other body parts.



Fig 1-physical appearance of the hand.

She was x-rayed and her forearm x-ray showed two ulnas with broadened ends and absent radius and x-ray of the hand showed duplicated carpal, metacarpal bones and digits





Fig-2 –hand and forearm x-rays

Treatment

The child was operated at Cure Children's Hospital by Dr. Scott and his team at Cure.

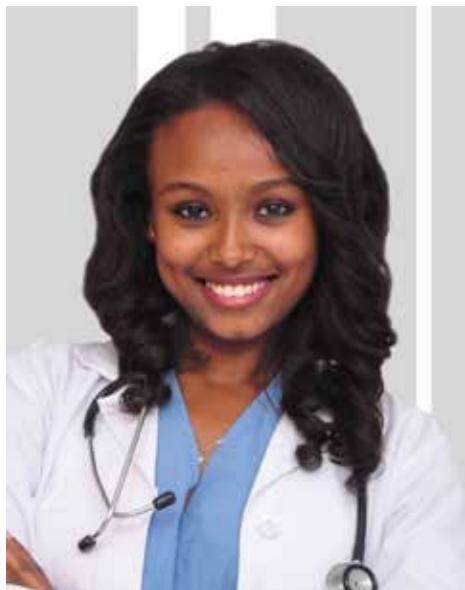
The goal of the treatment was to improve the hand deformity and function. Since the hand deformity was the parent's priority surgery focused on the correction of hand deformity than correction for loss of function at elbow and forearm. So after getting consent under general anesthesia the patient put supine and incision was designed as shown on the photograph below. The plan was to excise extra digits (radial index, ring and little digit) on the radial side with preservation of radial long finger for polisization.



volar skin flap design



dorsal skin flap design



Time out

....By Hiwot Hailu, MD

....1 out of 4 orthopedic surgeons will have wrong site surgery incident in their career...

“TO ERR IS HUMAN”.OR DOES THAT NOT APPLY TO DOCTORS.HAVE YOU EVER ENCOUNTERED WRONG-SITE SURGERY IN YOUR CARRIER?

Do you think a simple routine check will save patients life and surgeons career?

I remember once I heard someone asking “What is the difference between a surgeon and a murderer?

They both stab a person with a deadly weapon after all! The difference is the intention at heart.” The surgeon tears the skin & flesh to cure the ailment, correct a defect or at least alleviate suffering. This being said, one of the dreads of a surgeons carrier is operating on

the wrong patient or for the wrong reasons; which can, not only end his carrier as a healer, but might throw him/her to the league of criminals in a snap of a finger.

Results of an AAOS member survey in 2009 showed out of 917 surgeons 483 reported observed medical errors in the past 6 months. And one out four orthopedic surgeons will have wrong site surgery incident in their career. Most frequent errors included equipment related errors (29.1%), communication failure (24.7%), and medication errors (9.7%) and wrong site surgery (5.6%). (1)

Wrong site surgery is defined as wrong side surgery, wrong procedure, on a wrong patient. (2) Of these wrong site surgeries 82% were wrong side surgeries, 14% wrong procedures, and 5% were performed, though difficult to believe, on the wrong patient. Some of the reasons proposed are involvement of multiple surgeons, multiple procedures, new & unfamiliar equipment & procedures, stress and fatigue, hectic working environment, distractions like phones and radios.(1)(2)

For this reason WHO introduced surgical safety checklist in 2008 which includes

Sign in – before anesthesia
Time out – before skin incision
Sign out – before patient leaves operating room

Time out is a formal procedure for final confirmation of correct patient and surgical site before execution of the procedure. (3) It helps to correct for any misunderstanding and a means of prevention of horrendous errors. It is a highly beneficial ritual, both for the patient and the physician, which should be practiced during each surgery. And it doesn't take long; it can be fairly summed up in under a minute. Though I don't see it performed by our surgeons consistently, and sometimes even skipped altogether, it should be a standard operating routine just as scrubbing is. After all, it is better to be cautious beforehand than incite suffering on the patient, mess our carrier up and regretting it to the end of our lives.

As a Surgeon, we do complex surgery; why not pay attention to the simple but crucial step?

Let us time out and make our contribution to safe surgery.

Pic. 1 – ‘TIMEOUT’ checklist in the orthopedic operating room of Black-Lion Hospital, Ethiopia.



Pic 2. Surgical safety checklist (first edition) - WHO

SURGICAL SAFETY CHECKLIST (FIRST EDITION)		
Before induction of anaesthesia	Before skin incision	Before patient leaves operating room
SIGN IN	TIME OUT	SIGN OUT
<ul style="list-style-type: none"> PATIENT HAS CONFIRMED <ul style="list-style-type: none"> IDENTITY SITE PROCEDURE CONSENT SITE MARKED/NOT APPLICABLE ANAESTHESIA SAFETY CHECK COMPLETED PULSE OXIMETER ON PATIENT AND FUNCTIONING <p>DOES PATIENT HAVE A:</p> <ul style="list-style-type: none"> KNOWN ALLERGY? <ul style="list-style-type: none"> NO YES DIFFICULT AIRWAY/ASPIRATION RISK? <ul style="list-style-type: none"> NO YES, AND EQUIPMENT/ASSISTANCE AVAILABLE RISK OF >500ML BLOOD LOSS (7ML/KG IN CHILDREN)? <ul style="list-style-type: none"> NO YES, AND ADEQUATE INTRAVENOUS ACCESS AND FLUIDS PLANNED 	<ul style="list-style-type: none"> CONFIRM ALL TEAM MEMBERS HAVE INTRODUCED THEMSELVES BY NAME AND ROLE SURGEON, ANAESTHESIA PROFESSIONAL AND NURSE VERBALLY CONFIRM <ul style="list-style-type: none"> PATIENT SITE PROCEDURE <p>ANTICIPATED CRITICAL EVENTS</p> <ul style="list-style-type: none"> SURGEON REVIEWS: WHAT ARE THE CRITICAL OR UNEXPECTED STEPS, OPERATIVE DURATION, ANTICIPATED BLOOD LOSS? ANAESTHESIA TEAM REVIEWS: ARE THERE ANY PATIENT-SPECIFIC CONCERNs? NURSING TEAM REVIEWS: HAS STERILITY (INCLUDING INDICATOR RESULTS) BEEN CONFIRMED? ARE THERE EQUIPMENT ISSUES OR ANY CONCERNs? <p>HAS ANTIBIOTIC PROPHYLAXIS BEEN GIVEN WITHIN THE LAST 60 MINUTES?</p> <ul style="list-style-type: none"> YES NOT APPLICABLE <p>IS ESSENTIAL IMAGING DISPLAYED?</p> <ul style="list-style-type: none"> YES NOT APPLICABLE 	<p>NURSE VERBALLY CONFIRMS WITH THE TEAM:</p> <ul style="list-style-type: none"> THE NAME OF THE PROCEDURE RECORDED THAT INSTRUMENT, SPONGE AND NEEDLE COUNTS ARE CORRECT (OR NOT APPLICABLE) HOW THE SPECIMEN IS LABELLED (INCLUDING PATIENT NAME) WHETHER THERE ARE ANY EQUIPMENT PROBLEMS TO BE ADDRESSED <p>SURGEON, ANAESTHESIA PROFESSIONAL AND NURSE REVIEW THE KEY CONCERNs FOR RECOVERY AND MANAGEMENT OF THIS PATIENT</p>

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PATHOMECHANICS OF GOWERS SIGN

By: Bruh Kefale

Orthopedic surgery is one of the foremost sciences in medicine which benefited from the recent development of imaging modalities. The CT scan shows the bone to such a fine extent, and recently we even started to appreciate 3-D CT. MRI shows almost all the structures making up the musculoskeletal system with an unparalleled quality. Yes, orthopedics has travelled a long way since using plain x- rays as its sole investigative tool to the recent cutting edge

technologies, like PET scan & scintigraphy - which sometimes lures us from the pillars of medicine, history and physical examination. It is not exaggerating, thus, to claim that **physical examination** still holds a huge place in orthopedics and orthopedic surgeons or resident should be well versed in the matter, no matter how advance technologies are available around us.

Orthopedics is full of signs – usually named after great scientists & physicians as a means to detect and confirm disorders when x- rays and lab investigations were unavailable; orthopedics is riddled with eponyms – names credited to those who described various disease processes and fractures. The shoulder leads by having roughly more than 80 signs associated with it, followed by the knee. It is, in short, difficult to bear the name ‘orthopedic surgeon’ and not acquaint oneself with ability to execute a comprehensive physical exam, knowledge of the signs of orthopedic disorders, and interpret them accordingly, adequately.

This being said I will now embark on the brief description on the pathomechanics of Gowers sign; an eloquent screening test for muscle weakness, especially muscular dystrophies. I will try to explain the individual components of the sign, its defining features and discuss the reason behind it. I will use, additionally, a snap shot from a video taken from an actual patient presented to our orthopaedic clinic.

The muscular dystrophies are a group of hereditary disorders that produce progressive degeneration of skeletal muscle and associated weakness (with no sensory deficit). The most common ones are Duchenne muscular dystrophy & Becker muscular dystrophy; X-chromosome linked disorders characterized by mutations of the *dystrophin* gene – resulting in absence, decreased or abnormal production of *dystrophin*, a protein present in skeletal muscle, smooth muscle, cardiac cells and also in the brain. It is important in maintaining the stability of cell membrane cytoskeleton. Others include Emery-Dreifuss muscular dystrophy, Limb-girdle muscular dystrophy, congenital muscular dystrophy, Facioscapulohumeral muscular dystrophy.

The symptoms are seen in boys usually 3-6 year old. Clinical features include pseudohypertrophy of calf muscles; the tendency to toe-walking; a widely based, lordotic stance; a waddling Trendelenburg gait; and a positive Gower test indic-

ative of proximal muscle weakness.

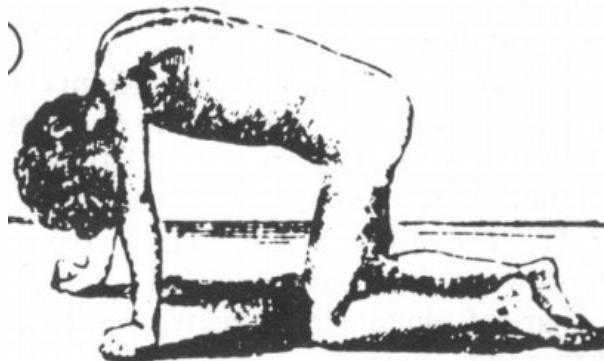
Though DNA analysis of blood samples, muscle biopsy & dystrophin testing confirms the diagnosis and even point to the specific diagnosis, a properly taken History, well executed physical exam& (if available) measurement of creatine kinase (which usually is dramatically elevated) often suffice to quick & accurate diagnosis.

Gowers sign is a clinical test first described in 1879 by sir William Richard Gowers, in a study of 21 boys with pseudohypertrophic muscular paralysis. He described the patients rising from the ground as “climbing up the legs”. They compensate for the weakness of the hip extensors (especially the quadriceps and gluteus maximus – the most affected muscles) by using their legs as support to rise up. Though initially thought this pattern of standing was pathognomonic for children with muscular dystrophies, it has subsequently been shown to be present in other children with proximal muscle weakness. The classical description is as follows; from a supine or sitting position, a child will first roll prone, extending their arms and legs far apart. With most of the trunk weight resting on the extended arms, they push the body backwards to shift the weight of the trunk over the extended legs. To extend the hip, the child places their hands onto the knees and walks the arms up the thighs until upright.

Though the description is simplistic, it usually manifests in severe and advanced cases. So other means of defining or identifying weakness deemed necessary.

One study graded the weaknesses as

- Mild weakness—prolonged or strained rise without support, rise using a one hand support on the thigh, or rise using one or both hands on the floor without thigh support.
- Moderate – use of the prone crawl position and



- one to two hands on the thigh in rising;
- And severe weakness – use of the prone crawl



position with more than two hand-on-thigh maneuvers, rising only with additional aid (chair, gurney, etc.), or being unable to rise.

The time to perform ranges from 1 second in a healthy child, to 3 second in the mild group, 8 in moderate and 21 seconds in severe.



Next I'm going to present series of photos taken from a video shot : a 17 year old male patient presented to the clinic with a muscular dystrophy - a mild one, probably a BMD (confirmatory tests pending). The video was taken after the patient was asked to elevate himself from the ground in a manner he usually does.



Pic. 4 – He clears his hands off the ground and uses his hands on both his thighs and finally stands up with a single thrust.

It took him 12 seconds to complete the ordeal, which indicates he has a moderate weakness.

WHY ALL THIS DO?

The first problem with this screening test is the classic sign is not evidenced in the early cases or might not be evidenced in the mild ones. A very good heads up for a physician to detect early muscle weakness in a child is as follows; if children continue to roll prone when attempting to stand at 30 months special attention should be paid to them. If they continue to roll prone at three years of age a full neurological assessment is warranted. Earlier diagnosis is helpful in providing management in the form of physical therapy, bracing & sometimes surgery.

BEWARE: Gowers sign is not specific to the dystrophies but can also be seen spinal muscle atrophy, polymyositis, discitis & juvenile idiopathic arthritis. An obese child might use a hand push off the thigh or the floor, which can give a false positive sign.

CONCLUSION

Gowers sign is an eloquent screening test for detecting muscle weakness especially in muscular dystrophies. It is a remarkable example where the art of physical examination still shines on in orthopedics. Since the classic description may not be seen in all the cases, detection of other subtle signs of muscle weakness in a child is very important to make early diagnosis which not only helps make an accurate diagnosis but an early one which helps to institute early management and also saves the parents from uncertainty and confusion.

2 salient features are important: (i) the children adopting prone position on all fours before attempting to stand, and (ii) the children walking 'walking up their legs'. It is the second sign that usually is found in the text books – the one I'm sure you, dear doctor, already know. It is the first that you are likely to miss. I hope this short article helps you to sharpen your senses a bit and reach a diagnosis early, accurately & easily.

Have a prosperous & delightful practice.

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On behalf of
our Patients,
**"BIG THANK
YOU" to SIGN
for continuous
support.**

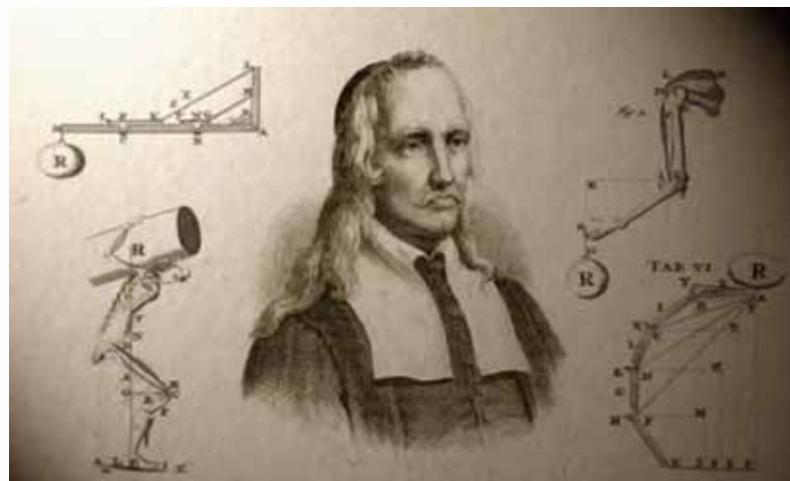
A HISTORY PAGE: THE FATHER OF BIOMECHANICS

By: Bruh Kefale

It is always difficult to contradict prevailing ideas and beliefs of a particular time period. It was the case in renaissance Europe, where religion was the powerful authority; it was not easy, even safe to propose ideas against what the church teaches, like applying the ideas of mathematics and mechanics to explain the workings of the sacred human body. We will see, in short, a brave person who does that, thus contributing to the growth of the science of orthopedics - *Giovanni Alfonso Borelli*. Life sciences are not new to the idea of receiving support from the physical sciences, not just borrowing principles but the actual contribution by the scientists. (Note that one of the three scientists received the Nobel Prize for discovery of one of the greatest breakthroughs of the century, the DNA - Maurice Wilkins – is actually a physicist.) Orthopedics is unique as a medical science that most of its principles are borrowed from engineering and, yes, even from carpentry. Instruments in the orthopedics theatre may seem like they are taken from a carpenter's tool kit, and some of the implants are known to be developed in a woodworkers' workshop or a garage. This story also discusses a person holding a large place in the history of orthopedics but, in profession, was far from the discipline.

Giovanni Borelli (1608 – 1679), was an Italian mathematician who pioneered the field of biomechanics via imagining the movement of the human body to a working of a machine, like a big clock, made of different parts, which in combination produces the fine smooth motion. He speculated, and later showed, by studying & understanding the individual parts making the limbs, we can understand their function and how they work and by putting all together we can understand the locomotory system. His investigation into biomechanics originated with his study of animals, which was published in two books - *De Motu Animalium I & II* (On the Movement of Animals.) His works were largely influenced by Aristotlean treatise, to the extent that his books bearing the same names as the great philosopher's. He later extended his knowledge & methods to the study of human beings, his greatest achievement. His work showed human body can be likened to a machine; very sophisticated machine but a machine nonetheless.

Not only did Borelli determined the position of the human center of gravity, but also recognized that forward motion entailed movement of a body's center of gravity forward, which was then followed by the swinging of its limbs in order to maintain balance. He was the first to understand that the levers of the musculoskeletal system magnify motion rather than force, so that muscles must produce much larger forces than those resisting the motion. His other studies of the human body includes study of the mechanisms of breathing & the heart. Apart from that, as was the custom of scientists of that age, he also studied astronomy, animal physiology & geology. Borelli is generally labeled as the father of modern biomechanics and the American Society of Biomechanics uses the *Borelli Award* as its highest honor for research in the area. We also like to honor the scientist by devoting an article in this journal. *Ciao*.



MANAGEMENT OF NEGLECTED OBTURATOR HIP DISLOCATION IN A CHILD- A CASE REPORT.

Berhe Gebreslassie, Orthopedic Surgeon, Ayder Referral Hospital, Mekelle University

ABSTRACT

Traumatic hip dislocations are rare injuries in the paediatric population, requiring urgent reduction to reduce the risk of avascular necrosis but it is common to see in a developing world patients presenting to hospital after months of time after visiting and having massage in a traditional healers.

Here I present a 10year old female patient presented to our hospital 86days after sustaining fall down accident from a 4 meter tree. She had been to traditional healer where she has massage but didn't improve. After arrival to our hospital patient managed by open reduction followed by three weeks skin traction and another three weeks non-weight bearing movement. On follow up she had a good range of movement of the hip with no deformity and leg-length discrepancy

Take a break



MEDICAL BLOOPERS ON MEDICAL CHARTS!**Collections by Nardos Worku, M.D.**

Mistakes are human! Public glitch embarrasses and the Medical profession is not exempted.

Too much work, too much to think about are probably the reasons that lead to the following **embarrassing 'errors'** and bloopers which were assembled from medical charts!

- The baby was delivered, the cord clamped and cut, and handed to the pediatrician, who breathed and cried immediately.

- Rectal exam revealed a normal size thyroid. (Long fingers?)

- A mid-systolic ejaculation murmur heard over the mitral area.

- She is numb from her toes down.

- Exam of genitalia was completely negative except for the right foot.

- When she fainted, her eyes rolled around the room.

- Examination reveals a well-developed male lying in bed with his family in no distress. The patient has no past history of suicides.

Patient has left his white blood cells at another hospital.

The patient expired on the floor uneventfully.

She can't get pregnant with her husband, so I will work her up.

He had a left-toe amputation one month ago. He also had a left-knee amputation last year.

The patient refused an autopsy.

The patient is a 79-year-old widow who no longer lives with her husband.

The patient left the hospital feeling much better except for her original complaints.

A medical student diagnosed PTSD in a 9 month old baby, and when he was asked how, he answered the baby drhad history of birth trauma.

Jokes

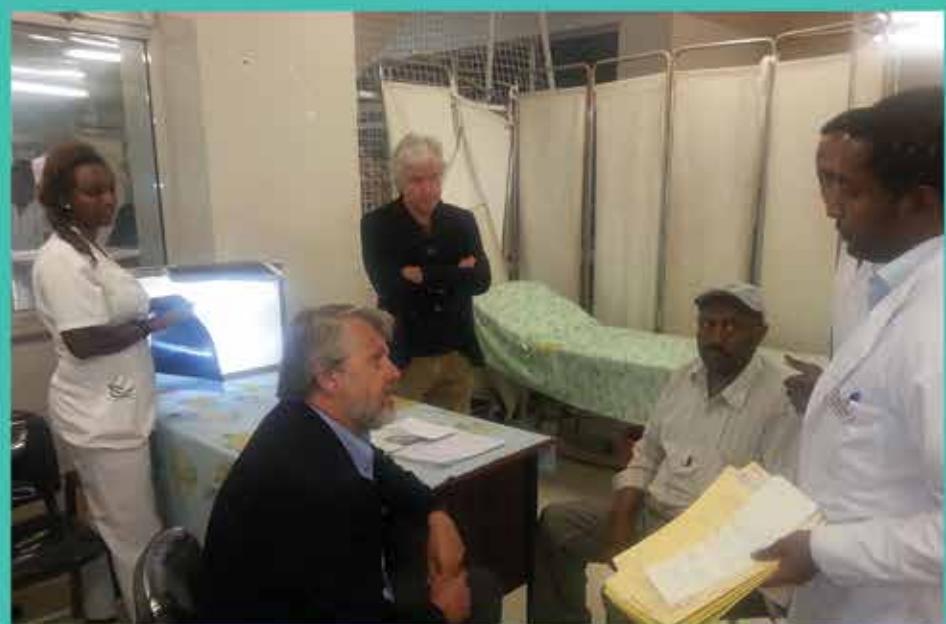
A man goes to the doctor and says to the doctor: "It hurts when I press here" (pressing his side) "And when I press here" (pressing the other side) "And here" (his leg) "And here, here and here" (his other leg, and both arms) So the doctor examined him all over and finally discovered what was wrong... "You've got a broken finger!"

A plumber is called to an orthopedic surgeon to fix a drain which is clogging. The plumber visits him shortly and fixes the problem in less than 30 minutes. He then hands the orthopedist the bill for fixing it. The orthopedic surgeon gets shocked at the cost mentioned in it, and tells the plumber that he doesn't make this much as an orthopedic surgeon. To this, the plumber replies, "I never made this much as an orthopedic surgeon either"!

How many orthopedic surgeons do you think it will take to change a small light bulb?...They will simply say that let them take out the socket as you won't be using it anyway, which will only cause you more trouble later.

There were only two people travelling in an elevator, an elderly lady and an orthopedic surgeon. When the lady was trying to get out of the elevator after reaching her destination, the doors started shutting. The orthopedic surgeon, being very kind, put his head in between the doors to let the elderly woman get out. The lady thanked him but asked why he used his head for this. The orthopedist, grinning broadly, replied proudly that he needs his hands for working





Give So Another May Live

Sarah Ermias

Did you know that other than the general surgical department, the orthopedics department at Black Lion Hospital, the largest referral hospital in the nation of Ethiopia, uses the most blood? In fact, it consumed over 17% of the 3732 units of donated blood that were used by the hospital in the Ethiopian year of 2013/14.¹ Therefore as members of the orthopedics community, we cannot ignore the vital role that blood donations have in saving patients' lives.

The paramount importance of giving blood is highlighted by its extensive history. For centuries scientists have been trying to perform successful blood transfusions following the first known attempt in 1628. The first successful blood transfusion occurred in 1665, but blood types, which ensure compatibility between donor and receiver, were not discovered until 1901. The Red Cross in the US opened the first blood collection center in 1948, and in 1970, blood banks begin moving toward a donor system based on volunteer donation.² Currently in Ethiopia the buying and selling of blood is banned¹, resulting in a dependence on donations from willing volunteers. Home to over 9 million people³, there is an outstanding need for donated blood that can be quantified at 100,000-150,000 units of blood every year. In 2014, only 87,685 units of blood were col-

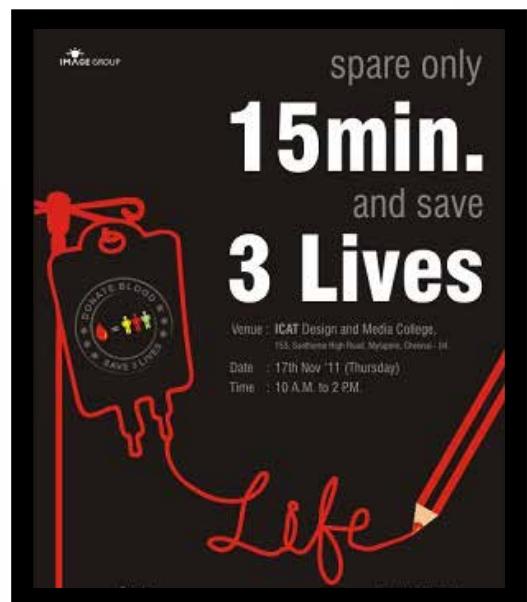
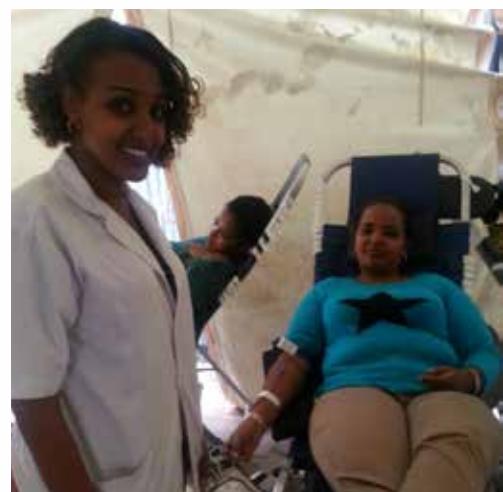
lected, an improvement from a mere 52,482 blood units in 2011, but still severely lacking.¹

The shortage of blood donations in this country can be attributed to a lack of awareness and various misconceptions surrounding the issue. Blood donor Misgina W/Gerima explains, "I had a wrong impression about blood donation. I thought I would lose all my blood if I donate. After some time, I got information on how it is done... and how useful it is for others who would otherwise die from lacking it. So taking all this into consideration, I decided to involve in the Blood Donation Program."¹ Frehiwot Worku, secretary general of the Ethiopian Red Cross, further clarifies, "There aren't enough people in Ethiopia who donate blood voluntarily to save lives, because they are not aware of the importance until something happens in their family that would require blood transfusion; it is only then that they realize the significance of donating blood and the importance of the Blood Bank."⁴ From these quotes it is evident that if the Ethiopian medical community can educate the public and raise awareness about the harmlessness and positive impact of blood donation, more people will recognize its importance and become willing to donate.

However, how can we expect the community to donate if we do not ourselves? Members of the medical community are busy, but we must make it a priority to set proper examples for the rest of the society. Giving blood saves lives just as any consultation or surgery. Furthermore, the process is simple, and only requires about 20 minutes of your time. The procedure begins with checking your weight, which must be at least 50 kg, and iron level in the blood.⁵

Next a nurse will cleanse and insert a sterile needle into the arm of your choice. You may feel a quick pinch, but only for a second. The drawing of blood only takes about ten minutes.⁵

After about half a liter is collected, the nurse will remove the needle. Apply pressure to the area for a few minutes.



Immediately afterwards enjoy a snack and something to drink. After resting for a few minutes, you can continue on with your day.

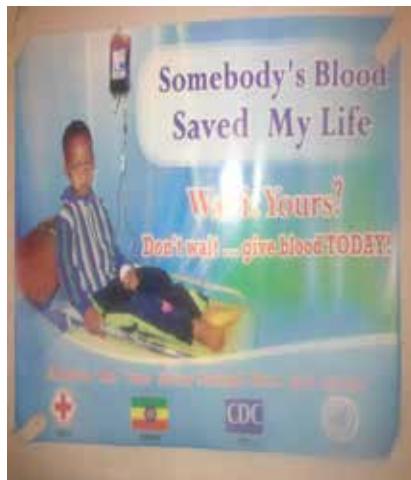


There are alternative blood transfusion methods, including volume expanders such as saline solution to increase fluid volume, artificial growth factors to boost red blood cell count, and intra- and post-operative blood salvage, which involves the collection and transfusion of one's own lost blood.⁶ Although these methods are used, they are chiefly for those whose beliefs disagree with accepting other people's blood, such as Jehovah Witnesses.⁷ The reliability and efficiency of these alternative options do not compare to that of blood donations. Besides the psychological benefits that come with the satisfaction of knowing your blood donation is helping to save lives, there are physical health benefits as well. According to the American Journal of Epidemiology, blood donors are 88 percent less likely to experience a heart attack, and 33 percent less likely to experience a cardiovascular accident. This is because removing iron from your blood circulation system reduces your risk of atherosclerosis, or the hardening of arteries.⁸ In addition, prior to donating blood, your blood pressure and cholesterol levels are

checked, two major risk factors of heart disease.⁸

Taking into account the ease of the process of giving blood, the personal health benefits, its substantial outcome, and the dire need of donated blood in this country, as healthcare workers, there really is no excuse. Together we can change the deficit of blood donations in this country into surplus. The Ethiopian Red Cross and CDC have begun to raise awareness with posters encouraging the Ethiopian community to donate blood. On November 2, 2014, Beza International hosted a major blood drive in which 150 people gave blood.¹ They hosted their second blood drive on June 7, 2015 and collected 125 Units; and plan to continue in the future. Individual Alebachew Dagne gave blood an astonishing 42 times, and has made it a part of his routine.¹

Join the movement so that next time you see one of these posters around your community, you can silently answer with equitable pride, "Yes, it was my blood that saved a life."



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The Impact of Musculoskeletal Impairment in the Lives of School age Children in Ethiopia

**Tewodros Tilahun Zerfu, MD, FCSes, Timothy Nunn, MD, FCS (Tr+orth)
Alice Egerton-Kemp (MD), Harriet Clarke (MD)**

Abstract

Introduction: WHO estimates about 300 million people in the world live with disabilities. In Ethiopia, persons with disabilities are estimated to be about 7.3mil. A significant number of children develop musculoskeletal impairments from various conditions like clubfoot, cerebral palsy, spina bifida, angular limb deformities, accidents and burn injuries. In this study we tried to see the impact of musculoskeletal impairment (MSI) on Ethiopian school age children.

Methodology: This was a prospective study done with open ended inductive interviews administered to the patients and care givers over a period of three weeks. Children aged between 5 and 18yrs and admitted for surgery with congenital or acquired musculoskeletal impairment are included in the study.

Results: The average age of the patients was 11.5yrs and most of them were male patients (62.9%). The average monthly income for families from Addis was 1700 birr and those from outside Addis were 1354.15 birr. Although they don't pay for the treatment in the hospital, the average expenditure for transport to the hospital, food, and accommodation for the patient and care givers was 1348 birr which was close to their monthly income. Fifteen patients (68.2%) reported they had difficulty getting this money. Words like 'very sad', 'ashamed', 'embarrassed', 'angry', and 'feeling inferior' are some of the words used to express the feelings the patients feel about their condition. One third of these kids don't go to school and of those that go to school they found the stairs and toilets difficult to use. Children with MSI also reported that they will be called crippled, made fun of, bullied or sometimes hit by peers or other adults and even siblings in some occasions. Half of them also reported being left at home alone.

Conclusion: The average expenditure to a hospital was comparable to the monthly income of the families and a lot of them reported borrowing money or selling a cow to make this trip. We should take their visit seriously and should try to understand the financial burden incurred by each visit. The abuse, discrimination, and isolation the kids experience needs to be understood and hence the need for psychological support in addition to the physical healing. The government and stake holders should take into consideration the special needs of children with MSI and address their problems with mobility and access in schools and also toilet issues.



ESOT Outreach services: ESOT-AMREF Collaboration

By Tewodros D, M.D; Zegene T, M.D; and Abeba

Introduction

AMREF

It is a project dedicated to address the need of Disadvantaged community by mobilizing the indigenous specialists from the country to provide Medical, surgical service to the patient on job training to the local staff and medical equipment maintenance service.

It was in 1957 that the AMREF Flying Doctors services established by three surgeons in Kenya. Since then, the flying Doctors have been involved in many health care projects in East Africa. Clinical Specialist Outreach project in Ethiopia is an extension of the flying doctors service uniquely contextualized to address the needs of the community using in-country professional and policy opportunities

As a result of under resourced rural hospitals significant proportions of surgical patients have no choice than travelling to Addis Ababa. This is evidenced by the very huge number of patients in the **waiting list** in hospital records and backlogs in hospitals based in Addis Ababa. A preliminary assessment conducted in Black Lion Hospital shows that currently there are over 3,000 orthopedic patients and most of them were referred from outside Addis Ababa, are waiting for surgery. Generally regional Hospitals lack most of the general specialty areas including orthopedic surgery which is seriously lacking in many Hospitals.

In response to the acute gaps identified in health service delivery, the clinical specialist outreach program was initiated in Ethiopia in 2006. This program seeks to reduce existing skills and knowledge gap in Public hospitals and to facilitate specialist services and skill transfer thereby decreasing unnecessary referrals. The most important approach that AMREF used to establish a mobile specialists team framework by mobilizing the indigenous specialists and subspecialist professionals within the country is to build the capacity of health professionals at regional levels so that they will contribute towards efforts striving for sustainable quality health services at public hospitals

Previous orthopedic outreach services

In collaboration with the Federal Ministry of Health (FOMH), Regional Health Bureau (RHB), Ethiopian Society of Orthopedics and Traumatology (ESOT) and with government hospitals there were different orthopedic outreach activities performed in Metu, Karl, Arbaminch, Bisidimo, Mekelle, Durame and Yirgalem Hospitals. During these services over many orthopedic cases by different orthopedic surgeons were possible to be addressed in addition to teaching the medical students, nurses, health officers and other related health professionals side by side. According to AMREF the surgeons involved in those activities were from BLH orthopedic department, Mekelle, St.Paul and other hospitals were involved.



Dr. Biruk teaching and making rounds at outreaches

Recent outreach activities

With the same principles, by the facilitation of AMREF and ESOT there was an orthopedic outreach service performed in Mekelle hospital starting on July 8 up to 12, 2015. In general there were a lot of orthopedic patients on the back log for the last 7 years. One orthopedic surgeon and one final year orthopedic resident from black lion orthopedic department were involved. With the most helping and very cooperative OR staffs and the hospital management stuff in general around 28 orthopedic patients were successfully operated. The patients operated during the same service were those who were suffering from different orthopedic problems like infection, chronic fractures and dislocations which were maltreated by the local bone setters and different levels of chronic burn injuries to the extremities. As much as possible these cases were tried to be operated with available instruments and implants.



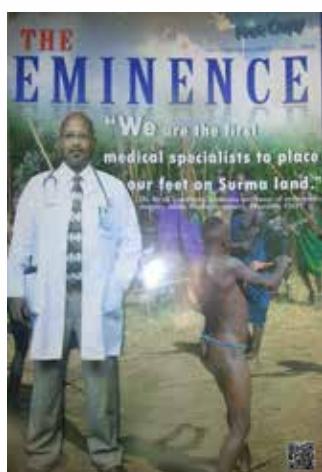
In addition to the operation, one surgical resident and three health officer students have got the chance to learn most of the surgical techniques and theoretical aspect of these orthopedic problems



In addition to operating in the OR the service includes evaluating patients and making rounds in the ward where both preoperative and post operative patients were there



Drs Geletaw and Tedros planning for possible fixations with what that Hospital has got!



A one week Surma medical mission, an amazing encounter!!

A lot more to see and hear...

Recommendations

As far as it is well known that these orthopedic problems are rampant all over the country which is associated with an increased the country's construction development, bone setters mismanagement of orthopedic problems and the currently growing number of orthopedic oncologic cases the service given for these needy patients is still inadequate due to different reasons like; inadequate orthopedic surgeons all over the country and most of the cases are treated by local bone setters or untrained clinicians, lack of orthopedic instruments in the most of even bigger hospitals, and very low health service seeking attitude of the society especially the attitude towards orthopedic treatment thinking that it can't be treated by a physician are the most important factors.

Finally as an orthopedic surgeon we recommend:

1. Expansion of orthopedic and traumatology teaching centers in the country to increase the number of well trained orthopedic surgeons
2. Teaching the society that these disabling and even life threatening conditions can be effectively treated by the trained clinicians
3. Teaching the bone setters how to act for the life threatening orthopedic cases what and when to refer cases and if they don't, the likely complication that will happen in particular and the impact on the country's development in general
4. Awaking the ministry of health and other stake holders the magnitude of the problem and the requirements in terms of facilitation of the health institutes with equipments and well trained staffs and develop awareness in the society.
5. And we appreciate and recommend to continuo the outreach services like the one facilitated by AMREF especially where the problem is very significant till we reach the time we can effectively cover the orthopedic problems in terms of facility and adequate trained orthopedic and traumatology surgeons.

ESOT Thanks all Ortho departments, Volunteer Surgeons and AMREF.





St. Paul's Hospital, the second largest hospital in Ethiopia, is located in Addis Ababa. Built by Emperor Haile Selassie in 1961 with the help of German Evangelical Church, it primarily serves those unable to afford care elsewhere, providing services free of charge to 75% of its patients. St. Paul's receives referrals from around the country and is under the guidance of the Ethiopian Federal Ministry of Health (FMOH).

A medical school, the millennium Medical College was opened in 2007 to commemorate the new Millennium era of the Ethiopian Calendar. The school was established by the Ethiopian Ministry of Health. It is intended to alleviate the severe shortage of Medical Doctors. In line with various encouraging efforts performed by the Ministry of Health (MOH) in this regard, it is clear that the newly opened school, with a practical modular and integrated curriculum will be providing much-needed professionals to the people of Ethiopia.

There are links with University of Addis Ababa, Jimma University, Tulane University, University of Michigan as well as the Open University.

The **Hospital currently has around 400 beds**, with an annual average of 200,000 patients and a catchment population of more than 5 million. There is over 1300 clinical and non-clinical staff in over **13 departments**. Most recently launched its new hemodialysis unit, Kidney transplant unit and Trauma centre. In the past years different programs are taken place in the college, Bachelor's degree in critical care and ICU nursing, Bachelor's in Midwifery, Bachelor's degree in operation theatre nursing. The 2012-2013 school year marked the inaugural year of the Ob/Gyn residency Post-graduate program and following this, post-graduate specialties in pediatrics,

SAINT PAUL'S HOSPITAL MILLENNIUM MEDICAL COL- LEGE & ORTHOPEDICS SERVICE

.....By Zegene Taye M.D, ESOT
Vice-Chairman.

surgery, internal medicine and radiology has taken place. Now days, the hospital general activity has increased and this has forced the college to increase the number of staffs (medical & paramedical) & expansion of different services to provide a better medical care and treatment to the population.

SHORT HISTORY OF ORTHOPEDICS AND TRAUMA SERVICE IN St. PAUL'S

The orthopedic service was one of the medical services rendered in the hospital. The service was delivered by general surgeons & expatriates for long time soon after the establishment of the hospital. But, starting from the past 14 years the orthopedics activity has taken place by the presence of orthopedic surgeons (Integrated by national & expatriate surgeons). The overall activity was running with limited bed capacity and resources (orthopedic instruments). It was a big challenge to deal with a trauma patients since the number of staff and complete instrument sets were not available.

In the past years the patients who came seeking orthopedic service following musculoskeletal injuries (different causes of trauma) has been managed with a great effort using available medical equipments and professionals, but, despite all effort made to deal with trauma patients we have reached in a difficult moment to render a good medical care. This time we are in limited conditions to satisfy patients need. The huge orthopaedic case load, lack of adequate & proper orthopedics equipments and implants and lack of adequate number of staffs has contributed a negative effect to deliver satisfactory trauma service.



Because of the above mentioned situations the Orthopaedic Unit in collaboration with the college administration bodies & having in consideration the following elements:

- The plan of FMOH and the college to open well equipped **NEW trauma centre**

- Commitment of staffs in every activity

- Harmonious working environment in the operating theatre

- Collaborating department like general surgery and others

- Strong Support from college administration to procure orthopaedics equipments and implants & increase the number of staffs in the near future

- Etc.

...Have been working in preparation & development of the curriculum for post graduate programme, launched the draft of curriculum in the workshop for discussion & comments & then sent to AC for approval.

This way we have taken the responsibility to start a post graduate program in the coming year and create our own new orthopaedic department to join our Pioneer medical school of Addis Ababa University orthopaedic department in the formation of Orthopaedic surgeons.

In short, a new ORTHOPAEDIC RESIDENCY PROGRAM is now opened in St. Paul Hospital MMC!

Congratulation for all of us!





BETAMETHASONE DIPROPIONATE 5 mg/ml / BETAMETHASONE SODIUM PHOSPHATE 2 mg/ml

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REFERENCES: 1. DIPROSPAN (betamethasone sodium phosphate and dipropionate suspension for injection) professional brochure. Data on file. 1997; Merck Sharp & Dohme Corp., a subsidiary of Merck & Co., Inc., Whitehouse Station, NJ, USA. 2. Schimmer BP, Parker KL. Adrenocorticotrophic hormone; adrenocortical steroids and their synthetic analogs; inhibitors of the synthesis and actions of adrenocortical hormones. In: Brunton LL, ed. *Goodman & Gilman's: The Pharmacological Basis of Therapeutics*. 11th ed. New York, NY: McGraw-Hill; 2006:1587-1612. 3. Blankenbaker DG, De Smet AA, Stanczak JD, Fine JP. *Radiology*. 2005;237(2):738-741.

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CORT-1124312-0000 07/16



Swiss Medical Experience in Ethiopia

Leonie W.

It is no easy task to compare two countries as different as are Ethiopia and Switzerland. But it is easy to love and appreciate both for what they are, trying to understand and not to judge...

I am a medical student from Basel, Switzerland, doing a one month internship at the "Tikur Anbessa" Hospital - the largest tertiary referral hospital of Ethiopia. During my time in the Orthopaedic surgery department, I had the chance to see many patients - how they got diagnosed, treated and discharged. I would like to share my brief experience, outlining what seems important to me personally.

The healthy human body works exactly the same in people all over the world, but the diseases and problems we suffer from differ and so do the medical system and treatment methods.

One of the first things I noticed during my attachment is the **huge amount of fracture** and musculoskeletal patients this department handles - most of them injured in traffic accidents or falls. According to a study done at the "Tikur Anbessa" Hospital,

65% of all admissions during the time of one year were trauma patients. I started understanding this fact when, moving around, I discovered that the driving style and the whole traffic system are "unique" in Addis Ababa.

Second point I witnessed is the **late presentation of complex** cases. While some of the patients I have seen come after days or sometimes years showing late complications, others visited several traditional healers before coming here. In Switzerland we treat fractures mostly in the OR because patients want quick healing. Here in exchange the management is **often conservative**, even if that is not the method of choice. This is because there is a **striking shortage** of almost all orthopaedic implants and instruments. For the same reason joints are often fused instead of replaced. Function is the main outcome factor here; others are secondary or "luxury".

The lack of orthopaedic materials/implants is observable in the **operation room** as well. The surgeons seem not to be affected at all by repeated electric power outage, water, oxygen and sometimes lack of proper size of implants in the middle of major operations - they are used to it. Long and complex surgeries are performed under tough circumstances. Still, they always find a way to fix the fractures!

I am very impressed by the results which are achieved, comparing the material used in orthopaedic surgeries here and in Switzerland. In Ethiopia, surgeons use every material "economically". Instead of disposable papery gowns and covers, here they use sterilized reusable textiles. This alone reduces the amount of waste, produced by every surgery, to a minimum. And even though at first I wasn't very convinced by how sterile the OR environment really is here, the infection rates are impressively low. This is amazing!

Some of the things I have observed during my stay were quite shocking and hard to process. There are people with diseases or deformities in their last stage which I would probably never see in my home country - or even in modern day textbooks. The sad thing for me is to know that much of the suffering could be prevented if the awareness, money, material and staff were all sufficiently available on time. It is common to see patients with huge, metastasized bone tumours, long segment sequesters, ischemic complications from bone setters and severe infections, coming to the Hospital for the first time. The challenge orthopaedic surgeons face here is enormous and multifactorial. I can only admire the motivation and deter-

mination of the orthopaedic staff I have got to know during the last weeks. The stream of patients seems never-ending and whatever you do it's not possible to help them all in the way you'd wish to. There is too much work load. Still they keep going with positive energy, always improving for the better.

It was nice to see the teaching of young residents - eager to learn, doing rounds, seminars, research, lectures, clinics, consultations, small sessions, meetings, society activities... all happening under one roof in the great orthopaedic building of the Hospital. I observed a very smooth interaction between enthusiastic young specializing residents and the consultant seniors. The academic atmosphere is very friendly and stress-free. What I saw here is a big orthopaedic community!

I am very happy and thankful that I got the possibility to come to Ethiopia and learn from its people. Finally, I want to thank Dr. Biruk and everyone else that welcomed and accompanied me. I won't ever forget my time here and even if I can't make a difference right now this experience is definitely going to change the way I look at my education and medicine in general. You haven't seen the last of me yet!

Bis Bald!

Forbes' Top 10 of best-paying medical specialities

Compiled by Leonie W

Every year, thousands of medical students graduate from their universities after years of studying. But still they have a long way to go until they finally specialize in their chosen field.

At some point, every single one of them has to decide what departments they want to be working in for probably the rest of their lives. Based on which criteria do they make such a decision?

One important incentive might be money. Forbes has released a list of the ten best-paid medical specialities for the year 2015. It does this every year.

First on the ranking is Orthopaedic Surgery with an average \$464,500 per year.

The whole list goes like this:

1.	Orthopaedic Surgery	\$464,500
2.	Cardiology (invasive)	\$461,364
3.	Cardiology (non-invasive)	\$447,143
4.	Gastroenterology	\$441,421
5.	Urology	\$424,091
6.	Haematology/Oncology	\$396,000
7.	Dermatology	\$370,952
8.	Radiology	\$368,250
9.	Pulmonology	\$351,125
10.	General Surgery	\$336,375

Luckily, money is not the only factor for choosing a speciality. There is interest, ambition and the wish to help people. What did really make you choose your field of speciality?

For more details with pictures, please click this link below.

<http://www.forbes.com/pictures/eekj45fmdl/no-1-orthopedic-surgery/>





Management of Adult complex Distal Humerus Articular Fractures, Black Lion Hospital Recent Experience

**Ephrem G/Hana, MD
Biruk L Wamisho, MD, FCS**

Introduction

Distal Humerus fractures comprises of less than 2% of all fractures in adults. While relatively uncommon injuries, articular fractures of the distal Humerus continue to provide operative challenges to the surgeon in order that such complications as nonunion, malunion, decreased motion, and instability, are minimized.(1-3).

Operative management with open reduction and rigid internal fixation using the preferred method of plating allows early range of motion and thus limits the elbow's tendency toward stiffness. The optimal plating configuration for open reduction and internal fixation of complex distal humerus fractures is controversial. Distal Humeral fracture fixation can be achieved basically with three types of plates. (2-3)

1. 3.5 are mm straight standard plates that are intra-operatively contoured
2. Parallel pre-contoured plates
3. Perpendicular pre-contoured plates

The plates moreover can be placed with or without the locking screw principle. To date the first two plate configurations have typically been used. Historically the treatment with conventional reconstruction has been recommended by the AO group. However this approach has been widely criticized mainly because obtaining adequate screw purchase and length in a posteroanterior direction through a posterolateral plate can difficult. In addition Traditional straight plates weaken with repeated bending in the OR though it is not a time efficient work to contour the plates. There is increasing biomechanical evidence supports use of a parallel construct in open reduction

and internal fixation of distal Humerus fractures.(4) paper is a review of Black lion hospital current experience in the management of Distal Humerus articular fractures with the use of parallel pre-contoured plates and the surgical technique of fixate.

2. Parallel pre-contoured plating

Mayo Clinic Congruent Elbow Plates are pre-contoured to match the natural anatomy of the elbow, minimizing the need for the surgeon to bend the plates prior to application. For complex fractures, the plates are able to act as a template for anatomic restoration of the elbow. Pre-contoured plates offer a stronger construct while maintaining a low profile. The Multidirectional Screw Angles give the surgeon the freedom to angle the distal locking screws up to 20° in each direction. This provides flexibility when capturing fracture fragments while maintaining the benefits of a traditional locking screw. This design of the plates allows for maximum fixation and stability in the distal Humerus and proximal ulna.

Plates should maximize stability of periarticular fragments to facilitate rehabilitation. Clustered screw holes in the articular region increase stability and strength of the reconstruction. This improved stability allows the plates to compress these articular fragments with the shaft to achieve union of the fracture fragments. Plates should offer a low profile design to decrease irritation and hardware prominence. Plate profile and screw/plate interface were designed with the soft tissues in mind. The plates are thin down in the periarticular region and the screw heads are recessed within the low profile plates.(5)



Figure 1. The plates accommodate 20 degrees of freedom in each Direction



Figure 2 .Figures showing Low profile plates which fits to medial epicondyle anatomy

2.1 Technique

In the last few years we have managed nearly---- cases of complex Distal Humerus articular fractures. We will discuss the surgical techniques of open Reduction and internal fixation of Distal Humerus complex articular fracture.

2.1.1 Approach

In distal Humerus fractures , we prefer the exposure to be the posterior approach because of its great Versatility. This approach permits to reach not only the posterior but also the medial, lateral and to a lesser extent anterior part of the joint and every type of distal humerus fracture can be treated with a posterior skin incision. “The front door to the elbow is at the back” is the famous sentence by Drshawn O’Driscoll.

2.1.2 Patient Position

Patients are positioned in lateral Decubitus with the arm supported over a bolster. This approach allows for full exposure of the articular surface.

Pneumatic tourniquet usually applied to help in clear exposure while exposing the ulnar nerve and both columns.

2.1.3 Skin incision

Posterior midline straight incision just lateral to the tip of the olecranonis preferred. Though can vary depending on the fracture pattern, a 15 cm posterior incision will be adequate enough in majority of Distal Humerus fractures. The incision is carried down to the level of the deep Fascia and Triceps tendon, achieving two full thicknesses Fasciocutaneous Flap.

2.1.4 Ulnar Nerve Exposure

In the treatment of Distal Humeral fracture involving the medial column, the ulnar nerve requires to be always identified and dissected free throughout the cubital Tunnel to its first motor branch and in our experience it is always anteriorly transposed to protect it during the procedure and prevent contact with the plate.

2.1.5 Reconstructive procedure

Olecranon osteotomy approach offers the maximum exposure and therefore it is our preferred exposure in case of complex but fixable Distal Humerus Fracture. This approach is however is associated with a complication of Delayed Union, Non-Union, Malunion, prominent Hardware, intra-articular adhesion and arthritis. We haven’t followed our cases for long term to discuss the possible complications but we didn’t notice yet any complications in the short term follow-up.

This fixation strategy focuses on maximizing stability between the distal fragments and the shaft of the Humerus at the metaphyseal level. According to O’Driscoll this can be achieved by following a set of eight technical objectives (5):

1. Every screw should pass through a plate.
2. Each screw should engage a fragment on the opposite side that is also fixed to a plate.
3. As many screws as possible should be placed in the distal fragments.
4. Each screw should be as long as possible.
5. Each screw should engage as many articular fragments as possible.
6. The screws should lock together by interdigitation within the distal fragment, thereby Creating a fixed-angle architecture that provides stability to the entire distal Humerus.



7. Plates should be applied such that compression is achieved at the supracondylar level for both columns.
8. Plates used must be strong enough and stiff enough to resist breaking or bending before Union occurs at the supracondylar level.



A



B



C

Figure 3 A demonstrate all the techniques met by the surgeon to achieve very stable fixation system. Fig 3B one of our first patient who underwent similar procedure



Figures 4 Another patient managed with the same technique whereby Maximum Stability is achieved

3. Post-op Protocol

Immediately after closure, the elbow is placed in a bulky non-compressive Jones dressing with the upper extremity is kept elevated being on extension. When the fracture is associated with severe soft-tissue damage, the extremity is kept immobilized and elevated with the elbow in extension for 3-5 days postoperatively. If the fracture is closed and there is no severe

swelling or fracture blisters, the Jones dressing is removed after two days and a physical therapy program including active and passive motion is then initiated along with Indomethacin 25mg Po Tid for a month both to alleviate the pain after the procedure and to prevent development of Heterotrophic Ossification.

4.0 Conclusion

Distal humeral articular fractures would stay to be of great challenge to the operating surgeons but proper surgical pre-planning and use of low profile stable fixation systems will make life easy for the surgeon in the operation theater. We have witnessed that the parallel Anatomically congruent fixation system renders clinically a rigid construct to start early rehabilitation protocol.

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Child friendly Pediatric ward Renovation Project at Black lion Hospital

Contributed by: Ephrem G/hana, MD

This ward is ready to start full fellowship/sub-specialty program in Paediatric Orthopaedics. Trauma fellowship soon follows!

In accordance with the United Nations Convention on the Rights of the Child, there should a system of care that will focus on the physical, Psychological and emotional well-being of children attending health care Facilities, particularly as inpatients. Even in well-resourced countries, advances in medical and surgical knowledge have not always been accompanied by an equivalent attention to the child's broader physical and psychosocial needs (the needs of the child as a whole) but this Undermined issue is horrifying problem in resource limited setups like us. Being the only Teaching institute of the country, Orthopedic Department of Black lion Hospital used to have a separate pediatric ward isolated from the adult service in the Old Building of the Hospital. Late in 2014, Since the time the Department started to own a new state of the Art Operation Theater in the Rehabilitation building where the Department currently is residing with the Adult Patients, a new exclusive Pediatric ward has been established in the same Building. A volunteer team of Residents represented by Dr Ephrem G/hana and Dr Mahder Eshete along with a team of Artists led by Artist Eng Rahel Tesfaye, Wasihun Tesfaye and also Paint Expert Wasihun Eshetu took the initiative to renovate the ward to be children friendly ward.



A



B



C



practice with 22 appropriate pediatric electronic Beds and one furnished and Decorated Play Ground Room which itself hosts three Regular days of entertainment sessions held by “Fikat circus Group”, the so called laughter. The Project was officially inaugurated on the first of April 2015 by CEO of the college Dr Ahmed Reja and Dean of School of Medicine Dr Abebe Bekele. It was an amazing experience and of priceless value for the team of Volunteers to share joy of our poor little brothers and sisters.



E



F



H



G

Figure 1 pictures A, B, C& D Artistic Animal Wall paints outside and inside the Corridor of the ward which are refreshing to the Children

where they can at least satisfy their psychological demand. Thanks to the Financial Support of good willing people like Dr Fintan Shanon Thomas, regular volunteer visitor from Republic of Ireland, Dr Richard Gardner, Pediatric Orthopedic surgeon from Cure International children Hospital of Ethiopia, Dr woubalem Zewdie and ESOT with keen support of the President, Dr BiruK Lambisso and the Department itself with the full effort and follow-up of Dr Bahiru Bezbih, by then Head of the Department, the project is completed successfully .The fully Decorated ward is currently engaged in exclusive pediatric orthopedic

Figure 2 Pictures E,F,G,H demonstrating signatures of contributors for Renovation Program and Decorations of the friendly Play Ground Room



Investigation of Growth Changes from Transphyseal Retrograde Insertion of Femur IM nails – Experimental Animal Study"

Biruk L WAMISHO M.D, Lewis Zeirkle(SIGN) M.D.

ABSTRACT

Background: The distal femoral physis is the fastest growing physis in the human body. Overall, 70% of growth in the femur occurs at its distal growth plate: in girls varies from 60% at seven years of age to **90% at age 14**. Similarly, the contribution of the distal femoral growth plate in boys varies from 55% at seven years of age to 90% at age 16; **55%** of lower limb growth!

From the age of seven to skeletal maturity, the distal femur contributes approximately **1.3 cm per year to femoral growth**, except in the last two years, where it contributes half that amount.

The incidence of pediatric femoral fractures is increasing throughout the world. Treatment of fractures of the distal femur in the pediatric patient between the ages of 10 – 16 has been problematic. These fractures can be treated by traction which does not lead to adequate reduction in many cases. Flexible nails can be used but they do not control rotation. These flexible nails are placed proximal to the physis which may lead to physisal damage as this is the fastest growth area. This study is designed to evaluate growth changes secondary to physisal damage by placing a channel through the center of the epiphysis and physis and placing an intramedullary nail whose size is proportional to placing an **eight mm** intramedullary nail through an adolescent physis.

Methods: Four 4 months old sheep lambs were nailed. Two lambs at a time; 6 months apart. Slaughtered at 6 months and x-ray, pathology and clinical measurements were done.

Results:

Sheep ; Thigh Wt.; Rt. Femur Length (Operated); Lt. Femur length; Difference

1. Black	2.4K.G	15.9cm	16.4	0.5
2. White	2.7	16.7	17.1	0.4
3. Red	1.8	13	12.8	-0.2
4. Grey	2.1	14.2	14.3	0.1

External Circumference of femur taken with a plastic tape edge all round at the growth plate level bilaterally from same reference point is as follows:

1. Black sheep: Rt.side (operated)= 7cm; Lt. Side (control)= 7.2cm

2. WHITE sheep: Rt. Side= 7.2cm, Lt.side= 7.1cm

3. RED sheep: Rt. Side= 5.8cm, Lt side =5.8cm

4. GREY sheep= Rt. Side= 6.2cm, Lt. Side 6.0cm.

Maximum Heights/thickness of the growth plates at the centers (after longitudinal sectioning): (2.5mm, 2.3mm, 1.5mm and 2mm respectively).

Cartilage thickness Medial and laterally at peripheries= roughly the same; 1-1.5mm.

Hence width is not affected but length is.

PATHOLOGY report will be discussed/attached

STATISTICAL SIGNIFICANCE: Not significance using FISCHER's EXACT statistical test.

Conclusion: Putting narrower diameter of rods has caused less femur length discrepancy.

Consideration of trans-physial IM nailing has to be delayed and studied further in detail.

Dr. Duane Anderson and Dr. Kyle Stephens, Soddo/USA

Acetabular talk

Bony anatomy by x-ray, AP pelvis, obturator oblique, iliac oblique; CT imaging
10 types of acetabular fractures
Posterior and modified Stoppa approaches now the key approaches
Key instruments and implants
Selected cases



Pelvis talk

Bony anatomy by plain x-ray, AP pelvis, inlet and out let and CT
Classification and mechanism of injury
Surgical approaches
Percutaneous posterior fixation using C-arm
Placement of external fixeter into the anterior inferior iliac spine
Stoppa approach for anterior pelvis plating

Orthopaedics=Science + Art + Technology!!
These are some of fracture fixations done at
Black-lion hospital this year, Good Job!!!



Hemi-Bilateral POST-OP



Pelvis

Acetabulum

Retrocalcaneal fusion

Clavicle Plated



**OCCUPATIONAL INJURY in ADAMA;****Tesfaye Lema; M.D, MPH**

Background: Occupational injury is one of the major public health problems that threaten employee's lives damages human capital and increases the social cost of country. As any developing country, the prevalence of work related injury is high in Ethiopia, but there is no adequate information regarding to magnitude and predictors of occupational injury in Adama. Therefore, the objective of this study was to assess the prevalence and factors associated with occupational injury in Adama.

Methods A cross-sectional study with internal comparison was used after taking the study population from Adama town factory workers. From 70 factories stratified cluster sampling was used to select 35 factories. From selected factories 971 study subjects were selected by systematic random sampling technique. Data were entered in to Epi-Info version 3.5.3 and analyzed by SPSS version 20. Bivariate and multivariate analyses were performed to test associations. Variables having p value ≤ 0.2 in the bivariate analyses was entered into a multiple variate analysis.

Results annual prevalence rate of work related injury was 24.7% exposed workers. Workers whose age less than 30 years experience work related injuries almost 5.3 times higher compared to above workers above 30 years of age (AOR= 5.25 95% CI 2.65, 10.41). Workers who have less work experience were about 3 times more likely to report occupational injury than workers who have more than 5 years experience (AOR= 2.75, 95% CI 1.31, 5.77). Safety training and working less than 48 hours per week remained a significant predictor of occupational injury (AOR 0.41, 95% CI 0.30, 0.56 and AOR 0.33, 95% CI 0.37, 0.76 respectively). Workers who complained problems of sleeping disturbance were more likely to report 2 times excess or occupational injury compared with workers who did not report problem of sleeping disturbance (AOR 2.27, 95% CI 1.55, 3.33).

Conclusions: the prevalence of work related injury in this study was high (24.7%). Workers having less experience and sleep disturbance were exposed to injury. Workers having adequate safety training and working 48 hours and less decrease the prevalence of occupational injury.

Recommendation: Ministries of social affairs and factory owners have to work in collaboration to create conducive working environment

Key words: Factory, Work related injury, Adama



The aging orthopedic surgeon:

An area we need to address before others do it for us....when should a surgeon retire?

Habtamu Bayisa

4th year Orthopaedic Resident (BLH-CHS)

Question of when a surgeon should retire has been the subject of debate for decades. Both anecdotal evidence and objective testing of surgeons suggest age causes deterioration in physical and cognitive performance. Medical education, residency and fellowship training, and technology evolve at a rapid pace, and the older a surgeon is, the more likely it is he or she is remote from initial education in her or his specialty. Research also shows surgeons are reluctant to plan for retirement. Because of the dynamic world, treatment of almost all traumatic fractures and all degenerative joint Disease is different from the older practices.

Twenty-five years ago, all femoral shaft fractures were treated by 6 weeks in traction followed by 6 weeks in plaster cast. Now, almost all are treated with locked IM nails.

Thirty-five years ago, prosthetic arthroplasty was unheard of. So a typical orthopaedic surgeon who is today 56 years old or older could not have been taught the techniques of the current procedures during his or her residency education.

An elderly surgeon, after a day performing surgery, turns to his younger colleague and asks, “Bill, please take me to my office. I don’t know where it is”

A distinguished vascular specialist in his 80s performs surgery, then goes on vacation, forgetting he has patients in the hospital; one subsequently dies because no doctor was overseeing his care. An internist who suffered a stroke gets lost going from one exam room to another in his own office. A beloved general surgeon with Alzheimer’s disease continues to assist in operations because hospital officials don’t have the heart to tell him to retire.

These real-life examples, provided by an expert who evaluates impaired physicians, exemplify an emotionally charged issue that is attracting the attention of patient safety experts and hospital administrators. Unlike commercial airline pilots, who by law must undergo regular health screenings starting at age 40 and must retire at 65 — or FBI agents, whose mandatory retirement age is 57 — doctors are subject to no such rules. Nor are any formal evaluations required to ensure the continued competence of physicians, many of whom trained decades ago, to ensure that older doctors are competent to treat patients.

The effects of aging

“Only wine and cheese improve with age”

Many older doctors remain sharp, their skills up-to-date and their judgment honed by years of experience.

“Doctors are not immune to the effects of aging,” Norcross said, adding that the onset of dementia is often insidious and gradual. Too often, he said, health problems become impossible to ignore after a catastrophic event, such as the death of a patient. “Doctors with cognitive and neurological problems almost never have insight into their problems,” he said, and many deny that anything is wrong.

While few experts would argue that age alone should control who can continue to practice, some studies suggest that doctors’ skills tend to deteriorate over time. A 2006 report found that patient mortality in complex operations was higher among surgeons older than 60 than among their younger colleagues.

To address the problem in a systematic way, a small but growing number of hospitals — including the University of Virginia Health System, Stanford Hospital and Clinics, and Driscoll Children’s Hospital in Corpus Christi, Tex. — have recently adopted policies requiring doctors over a certain age — 70 at U-Va. and Driscoll, 75 at Stanford — to undergo periodic physical and cognitive exams as a condition of renewing their privileges.

“Colleagues have a code of silence,” said Burroughs, who spent 30 years as an emergency department physician. During his career, Burroughs said he followed several elderly doctors around, quietly correcting their orders to prevent mistakes. Such experiences, he said, are nearly universal in medicine.

“Most medical staffs look the other way, thinking, ‘There but for the grace of God.’ This person has been a good doctor, and we’re not going to betray him,” Burroughs said.

But that kindness can backfire, he added, subjecting patients to potentially disastrous consequences such as serious injury or death, and the faltering physician to a malpractice suit or the loss of a medical license.

John Schorling, a professor of medicine who heads U-Va.’s Physician Wellness Program, said “Pilots have people’s lives in their hands, and so do doctors.”

Experience versus Skill

Closely related to the problem of remoteness of education is the need to maintain old skills, develop new skills, and grow through experience. Experience alone can substitute for a lot of mechanical skills. It is generally agreed that the deterioration of purely physical skills begins near the end of the third decade of life (around age 28). Cognitive skills diminish later. Yet it is widely agreed that most surgeons reach their peak of overall performance around the second half of the fifth decade (45–50 years of age). What appears to be happening is that, for more than two decades, growing experience can and does more than compensate for diminishing physical skills.

Physical Decline

Greenfield and Proctor identified vision, hearing, motion, and dexterity as physical attributes of a surgeon that inevitably decline with age. Reaction time, the time needed to move in response to a stimulus, has been found to decline only slowly. Rovit lists other physical attributes that decline with age. “Maximum strength is generally achieved during the third decade of life, with a 25% loss of strength by age 65 years....As we age, visual acuity and accommodation decrease in association with hardening and yellowing of the lens [of the eye]...and pupillary shrinkage. Optimal performance requires...100% more [illumination] in workers older than 55 years”.

Cognitive Decline

Trunkey and Botney have developed a series of tests, together named the “MicroCog,” designed to detect “impaired competence occurring late in a physician’s career.” The tests measure “reactivity, attention, numeric recall, verbal memory, visuospatial facility, reasoning, and mental calculation.” According to the overall MicroCog scores, at all ages, physicians (not necessarily surgeons) perform better than nonphysicians, but even physicians by age 75 lose 25% of their starting score. The decline is very rapid by age 60. The data also show a decline in overall MicroCog scores for older physicians (not necessarily surgeons), both working and retired. At all ages, but especially at older ages, retired physicians scor

Education and Appeal to Conscience

Being a surgeon is perhaps the most privileged of all occupations. The sick, the pained, and the frightened—patients and their families—hand over in trust their most intimate matters of life and limb, life and death, vigor and disease. To be so burdened and simultaneously so honored is a privilege like no other. One reason surgeons may persist in their craft after their skills are gone is there is no other activity that is nearly so rewarding. R. M. Kirk points out this problem and suggests an acceptable substitute for surgery would be teaching. Mr. Kirk does not suggest continuing in teaching technical surgery to residents. Rather, he suggests retired surgeons could offer valuable teaching in four areas: (1) preclinical teaching to medical students, particularly anatomy and physiology; (2) clinical teaching to medical students, particularly coaching them in learning to take a patient history and perform a physical examination; (3) acting as an experienced surgical assistant to a residents in training; and (4) teaching basic surgical skills in workshops. The common thread connecting these four areas is they all require a lot of time, pay little or nothing, and place the teacher in a position where his or her actions cannot cause harm. Perhaps if the elder surgeon realized there are ways to continue making valuable contributions after retirement from performing surgery, he or she might be more inclined to retire before his or her skills are gone.

Summary: There Is a Problem!

Anecdotes suggest many surgeons lack insight into the gradual degradation of their own skills. Research has repeatedly documented that age causes deterioration in physical and cognitive performance. In general, older surgeons have had less education, at a more remote time, which is less applicable to present technology. There is weak evidence from clinical studies that links older surgeon age with more complications and less adoption of



modern technology. Other occupations (aviation) have statutorily mandated retirement ages. Other nations (United Kingdom) have statutorily mandated retirement ages for surgeons. There is no present outcry for a statutory-mandated retirement age for surgeons in the United States. Various American surgical societies have been coming to grips with this question for more than a decade now, but there has been no effective progress toward a solution. Educating surgeons to three facts may reduce the problem: (1) The surgeon's skills will fade; (2) planning may make retirement quite satisfying; and (3) retirement does not have to bring the loss of all self-worth and an imminent death. Finally, educating surgeons, colleagues of surgeons, hospital administrators, patients, and the plaintiff's bar may bring about changes that will induce surgeon retirement at an appropriate time.

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A Case Report on Popliteal Pterygium Syndrome

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Abstract

Popliteal pterygium syndrome (PPS) is a rare autosomal dominant congenital disorder with an incidence of 1 in 300,000 live births . The main clinical manifestations are popliteal webbing, cleft lip , cleft palate , lower lip pits , syndactyly , and genital and nail anomalies . Malformation of the lower limbs is the most difficult anomaly to deal with as neurovascular structures of the affected limb are sitting just under the skin fold . When popliteal pterygium syndrome is treated in a timely and appropriate manner a fair prognosis is observed . Here presented is a year old male patient who was brought for inability to walk as knees were in fixed flexion contracture secondary to PPS .

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Neglected traumatic hip dislocation in children: A case series

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CURE Ethiopia Children's Hospital (<https://cure.org/ethiopia/>)

Introduction:

Neglected traumatic hip dislocation is a rare condition in children. We report on a series of 5 children treated between March 2013 and June 2015.

Patients and methods:

Age range at presentation was 4-13 years (mean 7.5 years). All patients were male. Time prior to surgical intervention was 6 to 17 months (mean 10 months). All children had a posterior hip dislocation with two having an associated fracture of the posterior wall. All were treated operatively with an initial 10-14 days of skeletal traction followed by surgical exposure via a Kocher-Langenbeck posterior approach. In each case the acetabulum was obliterated with fibrous tissue. Four patients underwent open reduction and capsulorrhaphy with one patient requiring excisional arthroplasty due to severe avascular necrosis. Post-operative immobilisation was in a hip spica.

Results:

All four patients who underwent open reduction are walking independently and without pain at latest review (3-16 months post-operatively, mean 10 months). Radiographs show well-centred hips in each case. One patient has radiological evidence of AVN.

Conclusion:

At early follow-up, encouraging results can be expected following open reduction for neglected hip dislocation. It remains to be seen whether AVN will develop over time.





EMA Gold Medal Feb. 2015



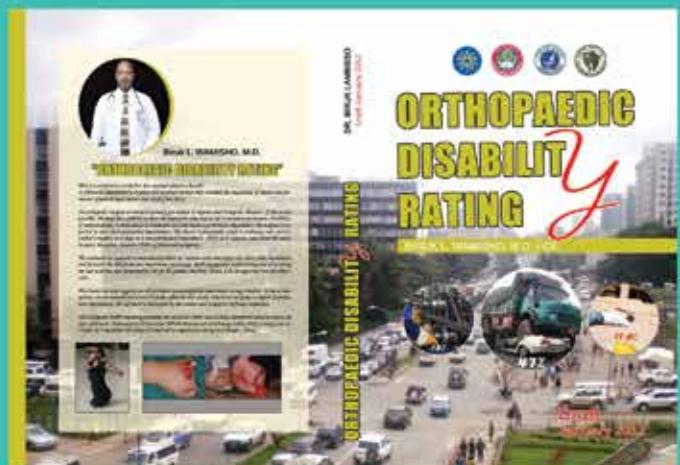
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Waiting for entrance exams



BLN-Ortho Staff



Dr. Biruk's New book on Orthopaedic Disability Rating is reprinted



Frontiers on biomaterials and biomechanics

ESIN/Ender/Nancy/
Fin-nail/metazeau

The Innovative concept of two Orthopedic Residents

By Leul Merid; Ortho Resident, AAU, CHS, SOM, department of Orthopedics

In the late 1970s at Nancy university hospital-situated in NE of France Jean-Paul Metazeau, M.D (**young chief Resident**) and Jean-Noel ligier, M.D (**Resident**) and Prof. Prevot(HOD) were working out a way to stabilize femur fractures in children.

They took up the idea and tailored the system to children's specific need and developed the concept of FIN.

Addresses the conflicting situations of having a very stiff device implanted in elastic bone tissue

FIN ranks as high as conservative treatment in pediatric traumatology:

As early as 1980s ESIN indications expanded dramatically it was first used in diaphyseal fractures:femur, and then tibia, both bones of forearm, and humerus. later on, metaphyseal fractures were also stabilized using different methods:

Neck of humerus.....adaptation of the hacketal technique

Supracondyle fracture-yields the most outstanding results=state of-the-art of the nancy method

Radial neck fracture is a tour de force the strike of a genius of Dr jean-paul metazeau

Hand surgeons gave up many years ago crossed wires and started to use IM wires for metacarpal and phalangeal fractures

Flexible Intramedullary Nailing (FIN) is a closed

internal fixation method based on the principles of primary fracture healing of nonoperative treatment. Fracture healing with FIN is predominantly by periosteal callus, which forms outside of the fracture.

The primary goal of FIN is the same as that of rigid fixation:

Please click the following link to read full article:

<http://ethiopianorthopaedics.org/presentations/>

Here are patients we treated at Black -Lion Hospital with ESIN

This is a 12 y/o male sustained MVA accident and injured his Lt femur

This is a 11 y/o male sustained falling down accident, had radio-ulnar fracture for which closed reduction attempted but unacceptable so we did ESIN



CABLES Vs WIRES in ORTHOPAEDIC SURGERY

Dr. Leul argues and challenges us saying this is the era of Cables and not of Wires!



Brief History of Wires and Cables in Medicine

Conventional binding wire

150yrs ago facilitated the transition from the age of conservative treatment of trauma to the era of surgery
Impossible to know the exact time first used, who used, and who proposed a new procedure and standardize the procedure

First used without a system/concept b/o intuitive feeling for bone suture

1870 lord lister know how became focused

Bernhard webers (1963)work on fundamental and possibilities of tension band osteosynthesis

Today every osteosynthesis should fulfill biomechanical criteria

Experiences with Circlage Wire: A Critique

Difficult to handle,troublesome, unsuitable

It is impossible to produce controlled interfragmentary compression b/c of its unfavorable material properties:due to plastic elongation and high level of rigidity -broken wire/inadequate fixation=illfated result

Bends and loops are in-built problems and visible proof of never attained solidity ,of imminent or even existent loosening-typical consequences:step formation ,angulation ,shifting and lengthening of joint surfaces as well as dislocation ends are twisted/turned into a loop –provide little resistance; it is not the unsatisfactory torsion knot alone, the knot is unmanageable and unsatisfactory

Permanent tautness couldn't be achieved despite all efforts by monofilament wire-a pre-requisite for stability I osteosynthesis

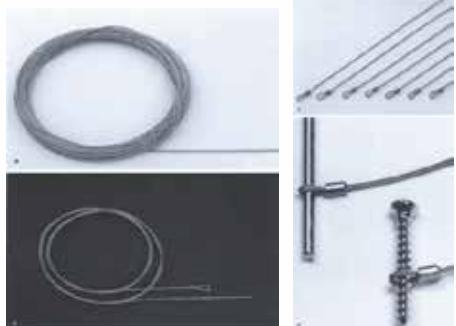
Wire Cables - State-of-the-art Solution

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Tools required upto now:repositioning forceps, curved pins, hammer,k-wires, cutters, raspatories =still needed, circlage wire and spanners discarded. instead wire **cables**, **crimps** and **PE-sleeves**, to insert and tighten cable,5 tools necessary: cable tensioner ,crimp pliers ,cable scissor ,awls curved and straight Wire cable



Made ss ,resistance to breakage 1770MP,consist 49 individual filaments,i.e 7 strands,with 7super fine wires 6 are wound around core-in round-stranded cross lay cables,came in d/t versionsCerclage wires and wire

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