

COSECSA Oxford Orthopaedic Link

Paediatric Orthopaedic Surgery Course

Advanced Orthopaedics Course: 29 February – 3 March 2016

CURE Ethiopia Children's Hospital & Black Lion Hospital

Addis Ababa, Ethiopia

COURSE REPORT



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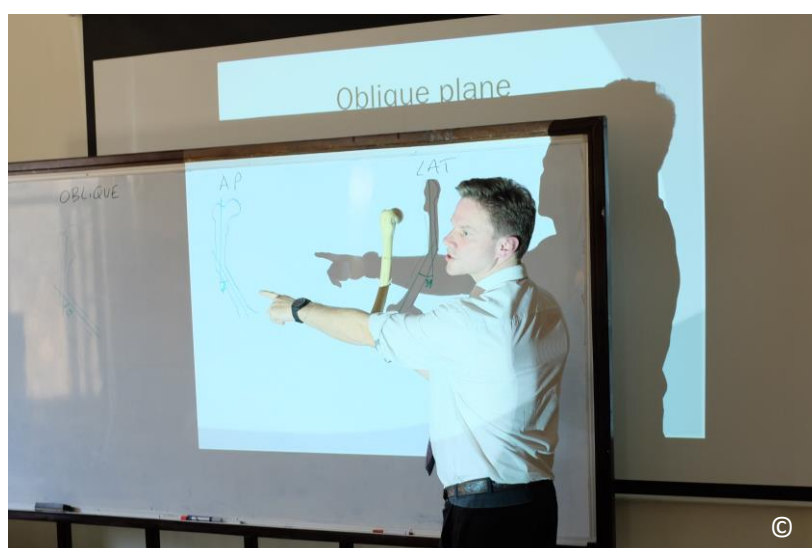


Executive Summary

CURE Ethiopia Children's Hospital and Black Lion Hospital co-hosted the third COSECSA advanced paediatric orthopaedics course in Addis Ababa, Ethiopia, in February 2016 for 35 local surgeons. This introductory course provided a unique overview of treatment of children's musculoskeletal impairments in sub-Saharan Africa, and was delivered by an experienced international faculty team from Ethiopia, Canada, and the UK through a combination of interactive lectures and a variety of practical workshops. This course was held as part of the COSECSA Oxford Orthopaedic Link (COOL) programme, a five-year collaboration between the College of Surgeons of East, Central and Southern Africa (COSECSA) and the University of Oxford. The course was very well-received by the delegates, who were mainly second, third and fourth year orthopaedic residents from the Black Lion Hospital. Orthopaedic training in Ethiopia has expanded rapidly in recent years and, following the success of this course, the course faculty and partner organisations are keen to explore ways to work together on further supporting orthopaedic training in Addis Ababa.

Background

A key aim of the COOL programme is to improve standards of care for musculoskeletal impairment (MSI) and to increase the number of health workers trained in MSI care. Conservative estimates based on a prevalence survey in Rwanda are that there are over half a million children in the COSECSA countries with untreated MSIs (1). The common MSIs affecting children in the COSECSA region (sub-Saharan Africa) are congenital deformity such as club foot, developmental conditions such as angular limb deformity, and infections of bones and joints e.g. osteomyelitis. If untreated, these children are less likely to access education and employment, their families are more likely to be economically poor, and other studies have shown that these children have a low self-esteem and carry stigma related to their disability (2). A recent major COSECSA report on workforce capacity shows that capacity for MSI care in COSECSA countries is between 1 and 10% of that of the UK (3).



Objectives

This four day paediatrics course was aimed at postgraduate orthopaedic trainees and consultants at the main university teaching hospital in Addis Ababa, the Black Lion Hospital. The course programme was adapted from previous similar courses run in Addis Ababa in 2014 and at Beit CURE International Hospital in Malawi in July 2013. The programme focused on a problem-based approach to paediatric conditions, with each module including clinical examination, different diagnostic investigations and surgical approaches.

Key Objectives:

1. To provide an overview of paediatric orthopaedic conditions
2. To develop understanding of concepts of treatment and management, and common pitfalls
3. To develop ability in diagnosing paediatric orthopaedic conditions and in forming strategies for dealing with these pathologies



Faculty

Dr Biruk Wamisho, Associate Professor of Orthopaedic Surgery, Black Lion Hospital and President, Ethiopian Society of Orthopaedics and Traumatology

Dr Geletaw Tessema, Assistant Professor in Orthopaedic Surgery, Head of Orthopaedic Surgery Department, Black Lion Hospital
Special interests: pelvic and acetabular reconstruction

Dr Birhanu Ayana, Assistant Professor in Orthopaedic Surgery, Black Lion Hospital
Special interests: neglected clubfoot

Mr John Cashman, Consultant Paediatric Orthopaedic Surgeon, Sheffield Children's Hospital
Special interests: paediatric limb reconstruction and tumour

Dr Mesfin Etsub, Consultant Paediatric Orthopaedic Surgeon, CURE Ethiopia
Special interests: paediatric orthopaedics and trauma

Dr Rick Gardner, Consultant Paediatric Orthopaedic Surgeon, CURE Ethiopia
Special interests: hip disorders, paediatric orthopaedics

Dr Sami Hailu, Consultant Orthopaedic Surgeon, Black Lion Hospital
Special interests: pelvic and acetabular reconstruction, arthroplasty

Dr Andrew Howard, Consultant Paediatric Orthopaedic Surgeon, Sick Kids, Toronto
Special interests: metabolic bone disease, paediatric trauma

Mr Fergal Monsell, Consultant Paediatric Orthopaedic Surgeon, Bristol Royal Children's Hospital
Special interests: paediatric limb reconstruction

Dr Tim Nunn, Consultant Paediatric Orthopaedic Surgeon, CURE Ethiopia
Special interests: limb reconstruction, neglected clubfoot

Mr Simon Thomas, Consultant Paediatric Orthopaedic Surgeon, Bristol Royal Children's Hospital
Special interests: paediatric hip, osteogenesis imperfecta

Mr Tim Theologis, Consultant Paediatric Orthopaedic Surgeon, Nuffield Orthopaedic Centre, Oxford
Special interests: neuromuscular disorders, paediatric tumours

Mr Jim Turner, Paediatric Orthopaedic Surgeon, Sick Kids, Toronto
Special interests: paediatric orthopaedics

Dr Tewedros Tilahun, Consultant Paediatric Orthopaedic Surgeon, CURE Ethiopia
Special interests: paediatric orthopaedics and trauma

Participants

1	Dr. Adisu Chala	Black Lion Hospital
2	Dr. Biruh Wubishet	Black Lion Hospital
3	Dr. Getnet Asnake	Black Lion Hospital
4	Dr. Leul Merid	Black Lion Hospital
5	Dr. Yared Solomon WOLDETSADIK	Black Lion Hospital
6	Dr. Abiy Worku	Black Lion Hospital
7	Dr. Abdurahman Ahmed	Black Lion Hospital
8	Dr. Ananya Kassahun	Black Lion Hospital
9	Dr. Eskindir Kebede	Black Lion Hospital
10	Dr. Ermias Gizaw	Black Lion Hospital
11	Dr. Mnewer Yirga	Black Lion Hospital
12	Dr. Melesse Gardie	Black Lion Hospital
13	Dr. Misgana Temesgen	Black Lion Hospital
14	Dr. Mahder Eshetie	Black Lion Hospital
15	Dr. Nardos Worku	Black Lion Hospital
16	Dr. Mohammed Issa DAWOD	Black Lion Hospital
17	Dr. Samson Tule	Black Lion Hospital
18	Dr. Sintayehu Bussa	Black Lion Hospital
19	Dr. Seid Mohammed YASIN	Black Lion Hospital
20	Dr. Sisay Belete	Black Lion Hospital
21	Dr. Tadesse Esayas	Black Lion Hospital
22	Dr. Yebchaye Wondafrash	Black Lion Hospital
23	Dr. Zeynu Zuber MOHAMMED	Black Lion Hospital
24	Dr. Birhanu Ayinetaw	Black Lion Hospital
25	Dr. Biniyam Teshome	Black Lion Hospital
26	Dr. Helawi Tewabe	Black Lion Hospital
27	Dr. Moa Chali	Black Lion Hospital
28	Dr. Semir Kassa	Black Lion Hospital
29	Dr. Tekabe Nigussie	Black Lion Hospital
30	Dr. Mengistu G/ Yohannes	Black Lion Hospital
31	Dr. Ebrahim Ahmed	St Paul's Hospital
32	Dr. Solomon Goshu	ST PAUL'S M M COLLEGE
33	Dr. Berhe Gebreslassie KASSA	AYDER REFERRAL HOSPITAL
34	Dr. Mbonisi Malaba	AIC CURE KENYA Hospital

Activities

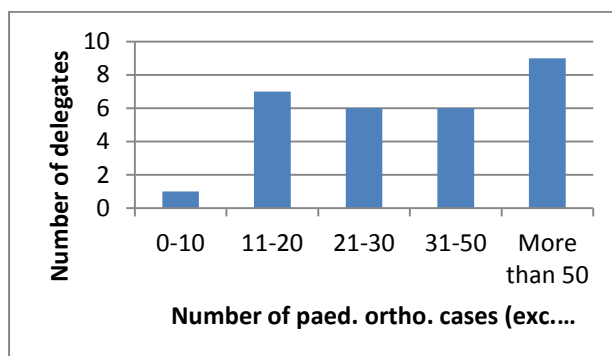
Morning lectures were held in the chapel at the CURE Ethiopia Children's Hospital. Dr Biruk Wamisho opened the course on behalf of the Ethiopia Society for Orthopaedics and Traumatology (ESOT) and Dr Geletaw Tessema gave a welcome address. In the afternoons, the delegates were divided into two groups for parallel practical sessions at the orthopaedics department at the Black Lion Hospital and the anatomy laboratory at the College of Health Sciences, Addis Ababa University (see Appendix 2 for teaching schedule). Certificates of attendance were awarded on the final day of the course.



Evaluation

Number of attendees: 32

1. How many paediatric orthopaedic (Except trauma) cases have you seen or treated in the last year?



2. What did you enjoy most about the course?

Cadaver sessions = 11

Experience share = 6
Practical sessions = 5
Morning discussion and presentation = 3
Case presentation = 2
Deformity correction = 1
Pelvic osteotomies = 1
Fractures = 1

3. What are the most useful or interesting new skill/concepts that you have learned?

Surgical approaches = 10
Pelvic osteotomies = 9
Spatial frame = 6
Deformity analysis = 3
Deformity correction = 3

Following patient outcome = 1
Paediatric orthopaedic problems = 1
How to do seminar presentations = 1
Approach to muscular dystrophies = 1
Examination of CP patient = 1

4. Which session would you definitely keep in the course next time it is run?

Cadaver sessions = 13
Deformity Correction = 5
All = 3
The hip problem (DDH) = 2
Surgical approaches = 2
Club foot = 1
Pelvic osteotomies = 1
Ponseti Treatment = 1
Spatial frame = 1

5. Which session would you remove from the course if you had to cut one session?

None = 17
Club foot & Ponseti = 2
Infection = 1
Cadaver dissection = 1
Spina bifida lecture = 2
Coxa vara = 1
Management of neglected elbow dislocation = 1
Gait analysis = 1
Limb deficiency = 1

6. Which topic would you like more of in this course?

TSF = 6
Angular limb deformities, LLD, pelvic osteotomies = 6

All = 4
Deformity assessment = 4
Clubfoot = 3
Cadavers = 2
CP = 2
Hip deformity correction = 1
Foot dissection = 1
Neglected elbow = 1
Muscular dystrophies = 1
Trauma = 1

7. Which topic would you like less of in this course?

None = 12
Clubfoot = 2
Skeletal dysplasia = 2
PFFD = 1
DDH = 1
Research and ethics = 1
Gait analysis with technology we do not have = 1
Infection = 1

8. Would you recommend this course to a colleague?

Yes = 20

No = 0

Future planning

The course was very well-received by faculty and delegates and there is strong interest in developing this collaboration to run similar training courses in the future.

Acknowledgements

We would like to thank the excellent teaching faculty who gave so generously of their time. We are very grateful to Black Lion Hospital, College of Health Sciences Addis Ababa University and CURE Ethiopia Children's Hospital for hosting this training, and very kindly allowing us to use their venues and facilities. Thank you to all who have supported the training and who have helped in its organisation and running, including Dr Geletaw Tessema, Dr Biruk Wamisho, Dr Miliard Derbew, Dr Abebe Bekele, the Ethiopian Society for Orthopaedics and Traumatology, COSECSA, Endris Aragaw and CURE International UK. We are grateful for the continued support of COOL project directors Professor Chris Lavy, Professor Godfrey Muguti and Professor Hemant Pandit.

This course was funded through the COSECSA Oxford Orthopaedic Link (COOL) Project through the THET Health Partnership Scheme, which is funded by the UK Department for International Development for the benefit of UK and overseas health professionals. COOL is a multi-country partnership programme between the Nuffield Department of Orthopaedics, Rheumatology and Musculoskeletal Sciences (NDORMS) at the University of Oxford and the College of Surgeons of East Central and Southern Africa (COSECSA). The five-year project (2012–2017) combines research and training in primary trauma care and musculoskeletal impairment across ten sub-Saharan countries in the COSECSA region. It aims to meet the critical need for more health workers trained in treating serious injury and musculoskeletal impairment.

Report by

Dr. Rick Gardner, Course Organiser

Grace Le, COOL Project Manager

June 2016

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2. Atijosan O, Rischewski D, Simms V, Kuper H, Lingana B, Nuhi A, Foster A, Lavy C, *A national survey of musculoskeletal impairment in Rwanda: prevalence, causes and service implications*. PLoS ONE. 2008 Aug 6;3(7):e2851.
3. *A review of surgical capacity and surgical education programmes in the COSECSA region*. Internal COSECSA document coordinated by Dr Mary Thompson





APPENDIX 1: Feedback from Participants

'Very nice course, we need it every 6 months or less to update oneself'
'Very nice'
'Carefully selected and delivered'
'It was just fruitful'
'It was wonderful course but it would have given more days or selected few cases to discuss deeply'
'It is a very good eye-opener course'
'Very great, well organised, but short'
'We like all that was taught – would have been better if more can come'
'All the topics are relevant and practical'
'It is very useful and refreshing'
'Comprehensive and updated'
'It was interactive'
'I would like to thank all the faculty (both international and local) for their unreserved effort to transfer their knowledge and skills.'
'Keep it up!'
'Very good'
'Make course longer or choose fewer topics and go deeper'
'Next time please add one more day or common fractures in children and management'
'Fantastic – add one more day as some lectures rushed.'
'It was awesome!'
'It was a very informative course but it would have been better if there was more detailed discussion'
'Am very much happy that I may attend this course'
'Excellent, please continue in the future'
'All topics are done in excellent way'
'Everything was good'
'Very nice commitment'
'Should cover management of dropfoot'
'Absolutely outstanding'

APPENDIX 2: Teaching Timetable

Day 1: Monday 29 th February 2016		
The Hip		
<i>Morning: CURE Ethiopia Children's Hospital</i>		
Time	Duration	Topic
08.00-08.30	30"	Registration
08.30-08.40	10"	Welcome from local hosts and course introduction
08.40-09.00	20"	Pre-course assessment (MCQ)
09.00-09.30	30"	Perthes and coxa vara
09.30-10.00	30"	Pelvic osteotomies and hip arthrodesis
10.00-10.15	15"	Case review
10.15-10.45	15"	Coffee break
10.45-11.15	30"	DDH- Management of the child 0 to 12 months
11.15-11.45	30"	DDH-Management of the child 12 months onwards
11.45-12.15	30"	PFFD- management strategies
12.15-12.30	15"	Case review
12.30-13.15	45"	Lunch at CURE Ethiopia
13.15-13.45	45"	Transfer to Black Lion & set up workshops
<i>Afternoon: College of Health Sciences Anatomy Laboratory and Lecture Theatre at Black Lion Hospital</i>		
		PARALLEL SESSIONS
13.45-15.15	1hr 30"	<u>Group A:</u> Cadaveric workshop: Hip approaches
13.45-15.15	1hr 30"	<u>Group B:</u> Principles and planning of femoral/tibial osteotomies and case examples
15.15-15.30		Coffee
15.30-17.00	1hr 30"	<u>Group A:</u> Principles and planning of femoral/tibial osteotomies and case examples
15.30-17.00	1hr 30"	<u>Group B:</u> Cadaveric workshop: Hip approaches
17.00-17.15	15"	Questions and summary
17.15		Finish

Day 2: Tuesday 1st March 2016		
Neuromuscular conditions		
<i>Morning: CURE Ethiopia Children's Hospital</i>		
Time	Duration	Topic
08.00-08.15	15"	Welcome & Recap
08.15-08.45	30"	Diagnostic approach to neurological and muscular diseases
08.45-09.15	30"	Cerebral Palsy- Management of the ambulatory child
09.15-09.45	30"	Cerebral Palsy- Management of the non-ambulatory child
09.45-10.15	30"	Case review/gait analysis
10.15-10.30	15"	Coffee break
10.30-11.00	30"	Muscular dystrophy
11.00-11.30	30"	Osteogenesis Imperfecta
11.30-11.45	15"	Case example OI
11.45-12.15	30"	Metabolic bone disease
12.15-12.30	15"	Management of the drop foot
12.30-13.15	45"	Lunch at CURE Ethiopia
13.15-13.45	30"	Transfer to Black Lion & set up workshops
<i>Afternoon: College of Health Sciences (AAU) Anatomy Laboratory and Lecture Theatre at Black Lion Hospital</i>		
		PARALLEL SESSIONS
13.45-15.15	1hr 30"	GROUP A Cadaveric workshop: knee/foot/ankle
13.45-15.15	1 hr 30"	GROUP B Examination of a child
15.15-15.30	15"	Coffee
15.30-17.00	1hr 30"	GROUP A Examination of a child
15.30-17.00	1hr 30"	GROUP B Cadaveric workshop: knee/foot/ankle
17.00-17.15		Questions and summary

Day 3: Wednesday 2nd March 2016		
Infection and Deformity Correction		
<i>Morning: CURE Ethiopia Children's Hospital</i>		
Time	Duration	Topic
08.00-08.15	15"	Welcome & Recap
08.15-08.45	30"	Acute osteomyelitis and septic arthritis
08.45-09.15	30"	Chronic osteomyelitis- pathology, management of deformity and bone loss
09.15-09.30	15"	Case review of COM management
09.30-10.00	30"	Management of the post-septic hip
10.00-10.20	20"	Coffee break
10.20-10.45	25"	Diagnostic approach to children with angular limb deformity
10.45-11.15	30"	Analysis of deformity
11.15-11.30	15"	Blount's disease
11.30-12.00	30"	Diagnostic approach to skeletal dysplasia
12.00-12.30	30"	Research: Ethics and how (not to) design a surgical trial
12.30-13.15	45"	Lunch at CURE
13.15-13.45	30"	Transfer to Black Lion and workshop set up
<i>Afternoon: College of Health Sciences Anatomy Laboratory & BLH Morning Room</i>		
		PARALLEL SESSIONS
13.45-15.15	1hr 30"	GROUP A The Taylor Spatial Frame- intro and sawbone model
13.45-15.15	1 hr 30"	GROUP B Upper limb cadaveric session- approaches to shoulder and elbow
15.15-15.30		Coffee
	1hr 30"	GROUP A Upper limb cadaveric session- approaches to shoulder and elbow
15.30-17.00	1hr 30"	GROUP B The Taylor Spatial Frame- intro and sawbone model
17.00-17.15	15"	Case presentation, questions and summary

Day 4: Thursday 3rd March 2016		
Congenital Deformity		
<i>Morning: CURE Ethiopia Children's Hospital</i>		
Time	Duration	Topic
08.00-08.10	10"	Welcome & Recap
08.10-8.30	20"	Management of the neglected elbow dislocation
08.30-09.00	30"	Congenital pseudarthrosis of the tibia
09.00-09.30	30"	Tibia and fibula hypoplasia
09.30-09.45	15"	Case review
09.45-10.15	30"	Spina bifida
10.15-10.35	20"	Coffee break
10.35-11.00	25"	Obstetric brachial plexus palsy
11.00-11.30	30"	Planovalgus foot and cavovarus foot
11.30-12.00	30"	Management of the neglected clubfoot
12.00-12.20	20"	MCQ
12.20-12.50	30"	Lunch at CURE
12.50-13.30	40"	Transfer to Black Lion and workshop set up
<i>Afternoon: College of Health Sciences Anatomy Laboratory & BLH Morning Room</i>		
13.30-15.00	1hr 30"	GROUP A Ponseti casting
13.30-15.00	1 hr 30"	GROUP B Keeping out of trouble in paediatric trauma
15.00-15.15		Coffee
15.15-16.45	1hr 30"	GROUP A Keeping out of trouble in paediatric trauma
15.15-16.45	1 hr 30"	GROUP B Ponseti casting
16.45-17.15	30"	Closing remarks and awarding prizes and certificates
17.15		Finish