Otologic surgery in a rural Ethiopian community

- Dr. Nega Kiros Hagos
- Dr. Girma Tessema
- Dr. Yilikal Zemene Tassew
- Ms. Hanna Hailu Redleaf
- Dr. Miriam Redleaf

Global Hearing Health
Gallaudet University
October 10, 2015
Introduction

Disease Load

- African continent – Otitis Media
- Chronic ear disease
- Chronic perforations
- Tympanosclerosis reported as 11%
- Malnutrition and sanitation issues
Introduction
Training available

• Neighboring countries with some Otologic Training
• New Addis Ababa University ENT training program – 13 residents total
• 9 graduates from that program
Established Graduates

- Trained in Eastern bloc countries
- Trained in Egypt
- Trained in Germany
- Extent of hands-on experience
Terminology

- ENT = a surgical field
- Otolaryngology
- Ear doctor = a surgeon
- Operations = opportunity for training
- Ear operations are the scariest
- Temporal bone (drilling)
The Temporal Bone
The Problem

- Large population
- Higher rate of chronic ear disease
- Very few ear doctors
- The existing ear doctors have almost no surgical training
- Personal aside
My personal journey

- Adopted kids
- Local Chicago surgeon invited me to help with his friend’s eye and ear hospital
- Spiraled out of control – operations, supervising, fitting hearing aids, grading/records, temporal bone drilling, Visual Amharic
Grarbet Eye and Ear Hospital

- Founded by a neurologist = Professor Redda Tekle Haiamanot
- Is 2 hours south of the capital in Addis Ababa Ethiopia
- Patients come because of the reputation (Ear and Hearing (Audiology Without Borders))
Surgical Camps

- 1 week
- Patients pre-screened for surgical disease
- Efficient system – Sunday screening
- Patients stay until their operations
- Cost per patient approximately $100 = very expensive
My role

• NOT TO OPERATE
• Supervise the surgeons
• Answer questions
• Give a little talk every afternoon
• Operate when necessary
• Tally their operations and performance
• Give grades and certificates
Tallies- trainees

- 3 foreign graduates (the co-authors)
- 3 recent AAU graduates
- 3 current AAU residents

- And 1 recent AAU graduate (AA hospital)
Pathology

• Perforations 119/137 (87%)  
• Tympanosclerosis 38/137 (28%)  
• Cholesteatoma 17/137 (12%)
Operations

• 137 operations
• 94% under local anesthesia
• Tympanoplasties- 112/137 (82%)
• Mastoidectomies – 16/137 (12%)
• Ossiculoplasties – 12/137 (9%)
• Stapedectomies – 3/137 (2%)
• Canalplasty - 1
Closure rates

- 4 surgical camps
- 26/40 from first week came for f/u tests
- No complications
- 20/24 83% perforations closed (genetics)
- 18/26 69% with better hearing
- 5/6 (83%) of OCR’s had better hearing
Graduates’ continued activity

- 3 of the distantly graduated surgeons are now operating (100%)
- 2 of the recently graduated are now operating (2/5 = 40%)
- 1 still a resident
Areas from improvement

• Need more hands-on training
  – AAU collaboration
  – Capable teachers

• Need more temporal bone drilling work
  – AAU collaboration
  – Equipment transience
  – Capable teachers
Conclusions

• Safe and successful operations can be performed in this rural setting
• Local talent can be trained in the normal fashion
• Get everyone’s names and contact information
• Takes a lot of patience