



Zimbabwe Society
of Otolaryngologists



TEMPORAL BONE DISSECTION COURSE & REGIONAL OTOTOLOGY FELLOWSHIP LAUNCH

23-26 APRIL 2019

Harare

Zimbabwe



Training Date	23 -25 April 2019
Otology Fellowship launch	26 April 2019
Partner Institutions	IFOS, MEDTRONIC, UZ
Course Chairperson	Dr C. Chidziva

1. Background

A need has been realized in the region to train practicing Otolaryngologists in dissection of the temporal bone and improve healthcare for all. The course was first introduced in 2017 and participants benefitted a lot hence the need to have a follow up course and access the impact of the training.

The 3rd IFOS-UZ Regional Annual temporal bone dissection workshop was characterized by so much enthusiasm from both faculty members and participants.

2. Training Aims and Objectives

Lectures

- ✓ Demonstrate improved knowledge in the management of patients with surgical and medical otological problems.
- ✓ Implement strategies discussed in lectures to improve surgical techniques for routine otological procedures in the temporal bone laboratory.
- ✓ Improve quality of training, skills, equipment uses among surgeons
- ✓ Prepare for the establishment of the regional fellowship in otology in Zimbabwe

This is the 3rd course running of which the inauguration course was held in 2017 at the same venue. The training curriculum, incorporating live surgeries in 2 theaters at Harare Hospital and HEENT Institute and the Temporal Bone Manual (Bradford) was used as the primary text, with the Faculty presentations presented lectures covering the key topics on various procedures, followed by practical demonstrations in live surgeries and participants' practice of these procedures using the temporal bone, cadavers and other media that simulate real-world practice.

Temporal Bone Dissection practicum lab

- ✓ Demonstrate strategies to improve surgical technique for chronic ear disease in the cadaveric dissection lab.
- ✓ Place an Osseo Integrated hearing device in the temporal bone to gain first-hand knowledge about the surgical management of patients with unilateral hearing loss.

- ✓ Implement strategies to avoid complications by better identifying and protecting vital structures in the ear including the facial nerve, the sigmoid sinus, the carotid artery, the cochlea and the brain.
- ✓ Practice performing a cochlear implant in the temporal bone lab.
- ✓ Improve quality of training in Otology in Africa

Table 1. Day 1 topics and practical sessions covered

DAY 1	
Topic	Facilitator/convener
Review of Otology cases and Otology mock exams	Prof Dave Strachan, Prof Chris Raine and local faculty.

Table 2. Day 2 topics and practical sessions covered

DAY 2: SCIENTIFIC SESSIONS	
1. Registrations	Lucid Events Management
2. Welcome remarks	Dr C. Chidziva
3. The Work Station	Prof C. Raine
4. Anatomy of the temporal bone	Prof D. Strachan
5. Blood supply and Incision	Pro D. Strachan
6. The facial nerve	Prof V. Cousins
TEA BREAK	
7. Principles of Surgery for mastoiditis as a complication of acute or chronic otitis media	Prof M. Profant
8. Vestibular schwannoma	Prof M. Profant
DAY 2: DISSECTIONS	
9. PRACTICAL SESSIONS:	
a. Temporal Bone dissection practicum lab	
b. Temporal Bone dissection practicum lab	
WELCOME DINNER FOR ALL	

Table 3. Day 3 topics and practical sessions covered

DAY 3: SCIENTIFIC SESSION	
Topic	Facilitator/Convener
1. Registration	Lucid Events Management
2. Cholesteatoma surgery	Prof M. Profant
3. Congenital Cholesteatoma	Prof P. Koltai
4. Endoscopic ear surgery	Prof D Stratchan
5. Surgery equipment	Medtronics
TEA BREAK	
6. Cholesteatoma classifications	Prof M Profant
7. Principles of intractable vertigo surgical management options	Pro V. Cousins Prof D. Stratchan
8. Clinical cases	
DAY 3 : DISSECTIONS	
9. Temporal Bone Dissection practicum	Prof P. Milan Prof V Cousins Prof P. Koltai
10. Temporal Bone Dissection practicum	Prof J Saunders Prof M Profant Prof V Cousins

Table 4. Day 4 topics and practical sessions covered

DAY 4: OTOTOLOGY FELLOWSHIP	
1. Registrations	Lucid Events Management
2. Regional Otology Fellowship	Dr C. Chidziva
3. Supporting surgery in the public health sector	Dr Tigere
4. Collaborating for improved training in ENT – the IFOS experience	Prof Milan
5. Ear surgery in the developing world – the Latin American Experience	Prof J Saunders
6. Promoting and regulating quality post graduate surgical training	Mrs J. Mwakutuya
7. Regional surgical training programmes	Dr C.S Samkange
8. Discussion	All
9. Feedback from participants and issuing of Certificates	All

10. Interactive dinner	All
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Table 5. Review sessions and Live Dissections: Harare Central Hospital

Live Dissections	
Case review sessions and selection	23 April
Scheduled theatre days Station: Feedback on operated cases	24 – 25 April Harare Central Hospitals 25 April
CASE 1	
Short history	6-year-old male child with anterior perforation for 6 months following traumatic attempt to remove foreign body in right ear canal at a local district hospital
Surgical & teaching time	10:00 – 13:00 hrs
Consultant Primary Surgeon	Prof. J. Saunders Dr Memory Bara
Surgical findings	<ul style="list-style-type: none"> - Healthy middle ear cavity - Intact ossicular chain - 50-60% anterior perforation with significant tympanic membrane posterology
Resuscitation	<ul style="list-style-type: none"> - Tragal cartilage graft transcanal approach
CASE 2	
Short History	36-year-old male patient with near total right meatal stenosis on a buctigrand of E.V.A and foreign body removal in a chemically discharged right ear from early childhood.
Surgical & teaching time	14:00 – 16:00 hrs
Consultant Primary Surgeon	Prof J. Saunders Dr Naboth Matinhira
Surgical Findings	<ul style="list-style-type: none"> - Pin hole remnant meatal foramen with cicatricial scaring; with tragal destruction. - Soft tissue thickening noted in the posterolateral wall of the right external auditory canal. - Intact tympanic membrane and centrally cited granulomas on the tympanic membrane - Rest of medial 2/3 of external auditory canal still minimally excoriated with scanty ear discharge
CASE 3	

Short History	80-year-old man who had presented 4 months prior with 3 months history of poor hearing fullness and mucopurulent discharge
Surgical & teaching time	1600 -1800 hrs
Consultant Primary surgeon	Prof J. Saunders Dr Memory Bara
Surgical findings	<ul style="list-style-type: none"> - Polypoidal mass; with an appearance typical of neoplastic growth breached the tympanic membrane filling up sub-totally the external auditory canal - Non-....; seemed to be rising through an anterior wall of mesotympanum
Outcome	<ul style="list-style-type: none"> - Residual growth left - Sample sent for histology - Definitive treatment plan to be done after histology results
CASE 4	
Short History	A 27-year-old female with a clean near-total right ear perforation.
Outcome	<ul style="list-style-type: none"> - Case cancelled – due to high blood pressure. On table, at induction for anaesthesia, on a background of having normal readings on card and no history of anti-hypertensive treatment. - Attributed to long waiting time and fasting for surgery. Was scheduled to start at 18:30 hrs and had been waiting since. Starved from 12 midnight.
CASE 5	
Short History	A 14-year-old female patient
Surgical & Teaching time	20:00 – 00:00 hrs
Consultant Primary Surgeon	Prof J. Saunders Dr Naboth Matinhira
Type of operation planned	Left tympano-mastoidectomy and consillectomy
Type of operation performed	<ul style="list-style-type: none"> - Left tympanoplasty with hearing mechanism reconstruction – cartilage conchal graft interposition. - Mastoidectomy not done for a major reason that the mastoid drill console failed to function - Incode- malleal couplex discilticilate to inspect attic and clean out any debris and inspect stapes movement and integrity. - Failed to use artclefus ossicle for reconstruction due to non- functioning drill. - Temporalis fascial graft fashioned.

Live dissections: Overview

- The zeal for the involved staff to tap into the long-term acquired experience from the visiting Professor.
- Untapped desire to offer surgical care to the needy population of our community despite the severe shortages currently prevailing
- Oneness and team spirit of the Harare Central Hospital surgical team, anaesthetic team, nursing team and the administrative team to make the programme of live surgeries successful.

Challenges

- Lack of improvement on surgical staff
- Surgical instruments need replacement and proper allocation

Table 6. Review of cases and Live Dissections: HEENT Institute

Live Dissections	
Case review sessions and selection	23 April
Scheduled theatre days	24 – 25 April
Station:	HEENT Institute, Harare
Feedback on operated cases	25 April
DAY 1	
CASE 1	
Short history	12 year old girl with a chronic history of right sided intermittent otorrhea who on examination was noted to have chronic inactive otitis media and a Tympanoplasty was recommended.
Surgical & teaching time	10:00 – 13:00 hrs
Consultant Senior Registrar in training	Dr C. Chidziva Dr Erasmus Muganda
Surgical findings	Dr Chidziva performed a Right Tympanoplasty using a temporalis fascia graft. 60% perforation was noted, ossicles intact
Outcome	Post operatively the patient is doing well, graft is intact.
CASE 2	
Short History	51 years old female patient with progressive hearing loss who was now deriving minimum benefit from hearing aid use. Hearing results showed severe to profound sensorineural hearing loss. A Cochlear Implant was advised and patient was agreeable
Consultants Senior Registrar in Training	Dr C. Chidziva & Dr Stratchan Dr Erasmus Muganda

Surgical & Teaching time	
Surgical Findings	Dr Chidziva and Dr Strachan did the Cochlear Implant and it had a signal in all the 12 electrodes.
Outcome	Post operatively patient is doing well awaiting the switch on which would be done 4 weeks post op
DAY 2	
CASE 1	
Short History	40 year old male patient, diabetic, with a chronic history of left otorrhea and poor hearing on the same side, it was now affecting his confidence at work because of the persistent otorrhea which was foul smelling, on examination had left ear canal stenosis and foul smelling otorrhea. CT Scan Temporal bone revealed a cholesteatoma and canal stenosis. Mastoidectomy and Canalplasty were offered to the patient
Consultants Senior Registrar in Training	Dr C. Chidziva; Prof C. Raine Dr Erasmus Muganda
Surgical Findings	Dr Chidziva and Dr Raine performed a Left Radical Mastoidectomy and meatoplasty. An extensive cholesteatoma was noted and was removed. A combination of microscope and endoscopy was used
Outcome	Post operatively patient is satisfied and recovering well
CASE 2	
Short history	17 year old male patient for right revision tympanoplasty. Patient had a right tympanoplasty using temporalis fascia which failed. He has bilateral Eustachian tube dysfunction and has a left cartilage graft which is intact
Consultants Senior Registrar in Training	Prof C. Raine Dr E. Muganda
Surgical Findings	Dr Raine did the right cartilage graft and a 50% central perforation was noted.
Outcome	Post operatively patient is doing well
CASE 3	
Short History	45 year old male patient with left chronic otorrhea and poor hearing who was noted to have a chronic otitis media with cholesteatoma. A left tympanomastoidectomy was offered

Consultants	Dr C Chidziva; Prof Raine
Senior Registrar in Training	Dr Erasmus Muganda
Surgical Findings	Dr Chidziva and Dr Raine performed the operation and an extensive cholesteatoma was noted in the mastoid cavity and middle ear cleft, sparing the stapes. Canal wall down mastoidectomy and tympanoplasty was done
Outcome	Post operatively patient is satisfied

Figures 1: Part of the Faculty from left Prof Raine (USA) Dr Stratchan (UK) and Dr Mwalufu (Malawi)



3. Course Outputs

The 2019 course had 7 facilitators:

- Prof M. Profant : Slovakia
- Prof V. Cousins : Australia
- Prof J. Saunders : USA

Prof. C. Raine : USA
Prof D. Stratchan : UK
Prof P. Koltai : USA
Dr W. Mulwafu : Malawi

There was a total of 34 Participants.

- Of the 34 participants in attendance, 8 participants came from regional countries as follows:

Kenya : 3
Madagascar : 1
Rwanda : 1
Botswana : 1
Burundi : 1
Malawi : 1

- Returning participants regionally were 3 and new participants were 5. Locally returning participants were 12 and 11 new participants.

Figures 2: Participants during one of the lectures



4. Budget & Expenditure Analysis

Actual expenditure amount exceeded the budgeted amount and this was due to the high inflation in Zimbabwe and the unstable prevailing conversion rates market coupled with other incurred expenses which were not budgeted for. Unlike in 2018, this year there was no additional sponsorship from the corporate world and other health institutions.

This then negatively affected the budget.
(See table

Table 3. Budgeted expenses

INCOME	USD
IFOS	10 000.00
Registration Fees	3 750.00
TOTAL	13 750.00
DESCRIPTION	
Hall Hire	480.00
Workshop catering & mock exams lunches	1 996.00
Accommodation Faculty	1 500.00
Accommodation Regional participants	2 000.00
Regional participants dinners & welcome dinner	760.00
Interactive dinner	1 300.00
PA System	240.00
Cordials	140.00
Name Tags	160.00
Stationery	160.00
Programme	200.00
Certificates	160.00
Transport	1 051.20
Consumables	493.47
TB Manual	232.80
Event Management	600.00

Faculty registration at MDPCZ	516.00
Interactive dinner entertainment	520.00
Live surgeries locum & surgery technicians	420.00
Lab Settings	329.60
TOTAL	\$ 13 258.47
	USD
Total Income	13 750.00
Expenses	13 258.47
Balance	491.53

Figures 1:



Figures 2: Dr Bandason from Zimbabwe receiving a certificate from Prof Profant and The Dean of University of Zimbabwe Prof. Masanganise



Figures 3: Prof Jim Saunders delivering a lecture



Figure 4: Group Photo



5. Challenges

Late registrations from local participants and last-minute cancellations from regional participants hindered pro-active planning. Faced challenges in procuring consumables due to unavailability in the market. The few suppliers who had stock had their products overpriced.

Some regional participants failed to come due to the following reasons: -

- ✓ Lack of funding for flights as we were only providing accommodation and meals
- ✓ No authorisation from their respective hospitals
- ✓ Due to limited staffing failed to find cover during the workshop dates.

Participants failed to keep time therefore delaying the programme.

6. Feedback from Participants (Survey Results)

Positives

- a. Subsidized cost of the course hence making it accessible to residents
- b. Large pool of trainers hence a wide
- c. Location of the training in Zimbabwe, air fare to Zimbabwe was surprisingly affordable
- d. No limitations to the number of bones available for drilling.
- e. The drilling equipment was very good.
- f. Interaction with other residents and surgeons across the region. This was beneficial for Networking

Negatives

- a. Sharing of practical stations

Ways to improve would be

- a. Having microscopes with a 2nd visualization arm, so as the trainer can observe how the trainee is drilling under the microscope
- b. Increase the duration of the course by a few days and maybe include advanced temporal bone drilling
- c. Trainees having access to theatre or audiovisual beaming of the activities in theatre when the surgeries are being performed

In conclusion the training was quite educative and participants benefitted from the course and the Faculty delivery very well their lectures and practical sessions.

7. Way forward

There is need for the workshop to continue in the region. It is anticipated that the Temporal Bone course will run as a yearly event. Sponsorship is of great importance to ensure the program remains effective and objective.

The 2020 workshop will be run in April of which dates will be confirmed. IFOS agreed to sponsor the event but on a limited budget of which additional sponsorship shall be required to be sourced.

8. Acknowledgment of Sponsors

Would like to thank the following for making the course a success: -

Monetary

IFOS

Equipment

Medtronic



Zimbabwe Society
of Otolaryngologists



Zisol members for supporting the event

Lucid Events for managing the event.

CONCLUSION

In conclusion the course ran very well and participants benefitted from the course and also gained experience through the practical sessions and live surgeries. The Faculty did a fantastic job of making sure that they impart their knowledge and experience to the participants.