BAOMS Surgical Report: Advanced Fellowship in Noma Reconstruction

OCTOBER 2017

ROBERT WOTHERSPOON - ST5
ORAL AND MAXILLOFACIAL SURGERY

Acknowledgements

Firstly, I would like to express thanks to the whole team for their enthusiasm, support and skill provided to all the patients in Ethiopia. Without the care and organisation of the Facing Africa Charity the disfiguring effects of this terrible disease would go on ignored by local authorities. Although only a handful of the potential patients are able to be treated on each mission, the impact of their surgery is clear.

For his organisation, teaching, patience, and encouragement I owe a huge debt to Mr Mizen. This Fellowship was his idea, and the time and effort involved in organising funding and training prior to the mission is greatly appreciated. The surgical teaching provided will benefit all patients I treat in future.

I would like to thank the surgical consultants: Mr Saleh and Mr Reid for their guidance and support throughout the trip and I will be able to take many aspects forward in my surgical career.

Also, I would like to thank the Facing Africa Charity. Chris and Terry Lawrence have set up a fantastic organisation solely aimed at treating this devastating disease and their energy and commitment is an inspiration to us all. By including a surgical trainee as part of the team for the first time they have opened up the surgical management of noma as a training opportunity, for this I will always be grateful.

Contents

Report of Facing Africa Mission October 2017'

Team members: Kelvin Mizen, Chris Lawrence, Dan Saleh, Rob Wotherspoon, Jonathan Reid, Bill Hamlin, Ian Stanley, Claire Baylis, Gro Hotvedt, Fiona Stainthorpe, Alice Herrington, Leona Burger, Elaine Eruenah, Ali Ghazanfar, Terry Lawrence, Angus Mack, Kidist Kebede, Tihtna Tafete, Jane Briggs, Emily Lowe

This is a clinical report of the surgery undertaken on this mission. It outlines the assessment and treatment performed over the 2 week period.

Week 1 (9-13/10/17)

Monday	Tuesday	Wednesday	Thursday	Friday
Fayou Abdusalem Debulk soft tissue flap left cheek (GA Size 6 nasal OK airway)	**Sintayu Ayenawie** Scar excision right cheek and left free radial forearm flap	**Adine Mahmud** Bilateral trismus release scar excision and left radial forearm free flap	**Shibru Haile** Bilateral trismus release + Submental flap	**Nyaluk Tor** Divide and reconstruct right upper and lower lip flap (GA Asleep nasal) **TFTs Hypertension/Protein**
Zinash Ali Wedge excision lower lip Debulk FOM flap (GA nasal tube)	**Sintayu Ayenawie** Scar excision and left free radial forearm flap (GA Left nasal tube good mouth opening / NG/ Urinary catheter)	**Adine Mahmud** Bilateral trismus release scar excision and left radial forearm free flap (GA AFOI with FONA / NG/ Urinary catheter) **U~~+e~~ CHECK**	**Shibru Haile** Bilateral trismus release + Submental flap (GA AFOI / Urinary catheter / NG)	**Samira Bari** Debridement left oribt +/- enucleation of left eye +/- skin graft

Week 2 (16-21/10/17)

Monday	Tuesday	Wednesday	Thursday
America Molla Debridement left face	**Legesse Tafeye** Total nasal reconstruction with rib graft forehead flap (GA – Oral Rae)	**Nuredin Mohammed** Columellar reconstruction (GA – Oral Rae)	
Zirutu Bushira Left peri-orbital reconstruction buccal graft and HT flap (GA – Nasal intubation / Glycopyrolate)	**Legesse Tafeye** Total nasal reconstruction with rib graft forehead flap (GA – Oral Rae)		
Shimeles Sirma Reconstruction of upper lip region			

Day 1 - 7/10/17

New and returning patient assessment at Facing Africa House Menagesha

34 patients assessed including new noma, hyena bites, facial burns. 12 patients suitable for primary and secondary reconstructive procedures. Various other assessments made of patients presenting with other defects including Tessier clefts, encephaloceles and plagiocephaly.

All members of surgical team involved in assessment and photographs taken to aid planning process.

Day 2 – 8/10/17

Treatment planning

Examination of ward and operating facilities at Hallelujah Hospital, Addis Ababa. Checking of essential operating equipment e.g. microscope.

Team meeting regarding operating lists and treatment planning. Discussion included all aspects including specific surgical and anaesthetic concerns. Any further investigative tests including CT scan and blood tests identified and ordered via local support team.

Provisional operating order and daily lists complied and distributed to all team members.

Day 3 – 9/10/17

<u>Fayou Abdulselam</u>

Submental flap left cheek May 2017 for Noma reconstruction

On examination: Bulky left flap, No trismus

<u>Plan</u>

Debulk left submental flap

Treatment: Debulk left submental flap and left commissure plasty

Excellent cosmetic and symmetrical result. Further revision highly unlikely

Debulk left submental flap and left commissure plasty

Assisted debulk and inset

Key points:

Flap debulked from inferior aspect

No skin removal until debulking complete

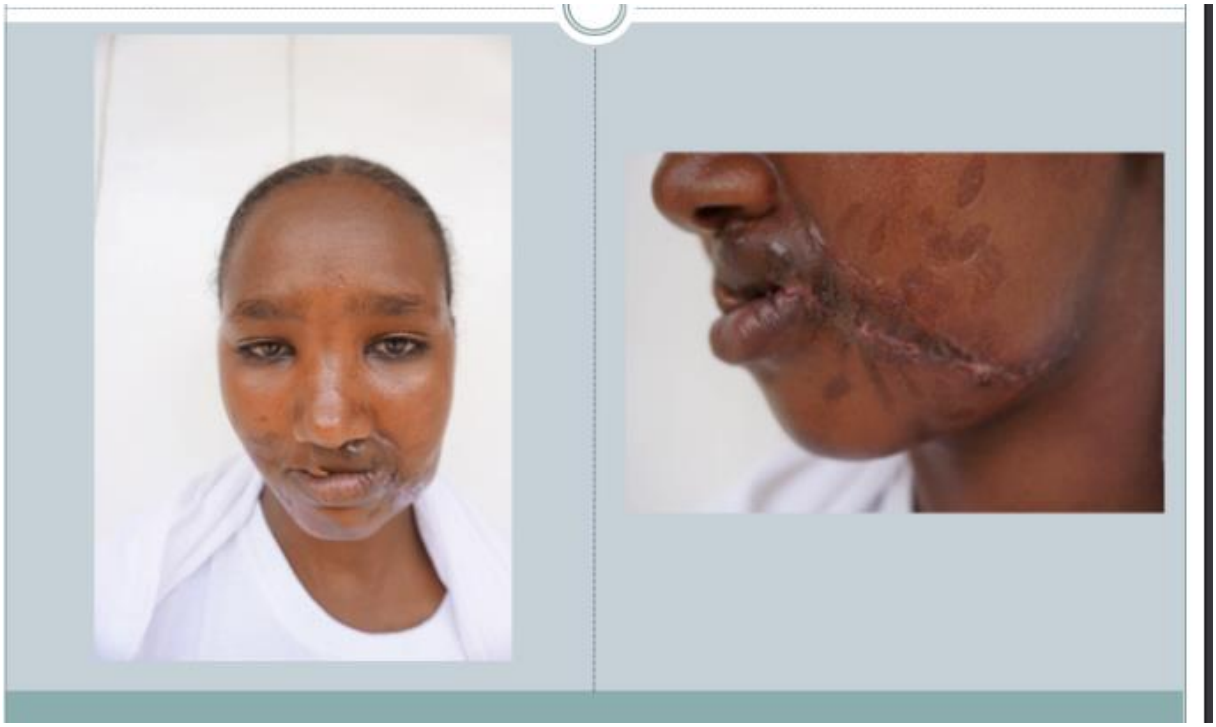
Aim to hitch corner of mouth to solid structure, in this case to digastric tendon on flap to periosteum

Careful approximation of mucosa of commissure including de-epithelisation as necessary to get accurate skin and mucosa closure

Release of superior scar band allows for smooth skin result

Excellent cosmetic and symmetrical result. Further revision highly unlikely

On DIscharge



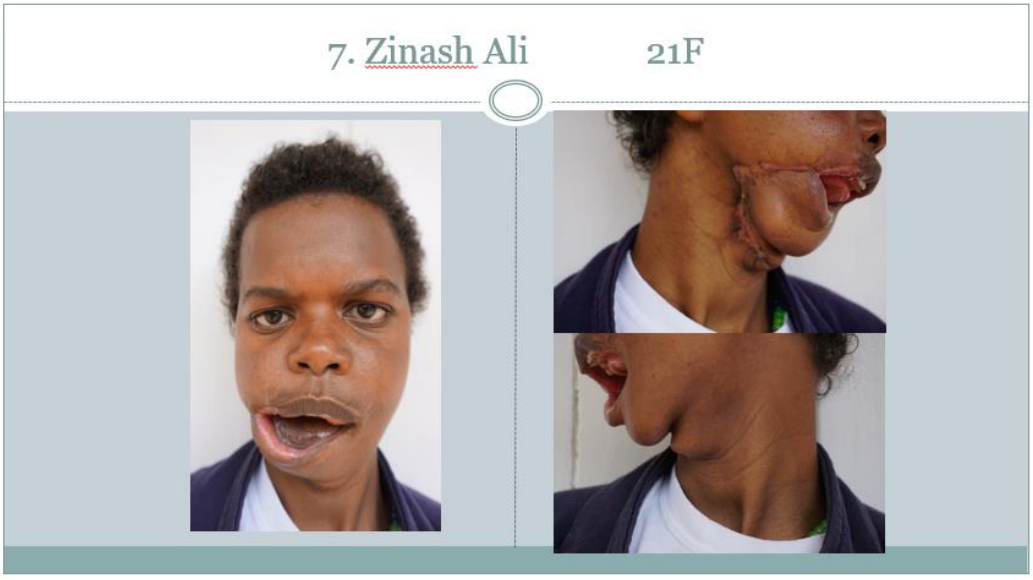
Zinash A

Fibula May 2017 for Ossifying fibroma

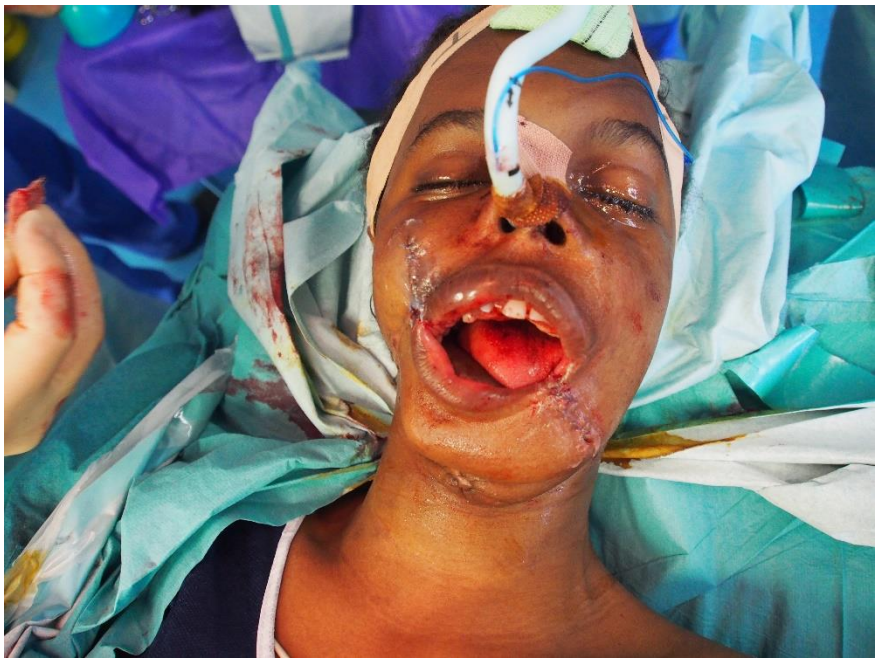
Normal mouth opening, would like lip reduction

Plan

wedge excision flap reduction



Treatment: Bilateral wedge resection lip



Bilateral wedge resection lip

(performed right; assisted left)

Key points:

Only short mucosal extension required as reconstruction not cancer resection

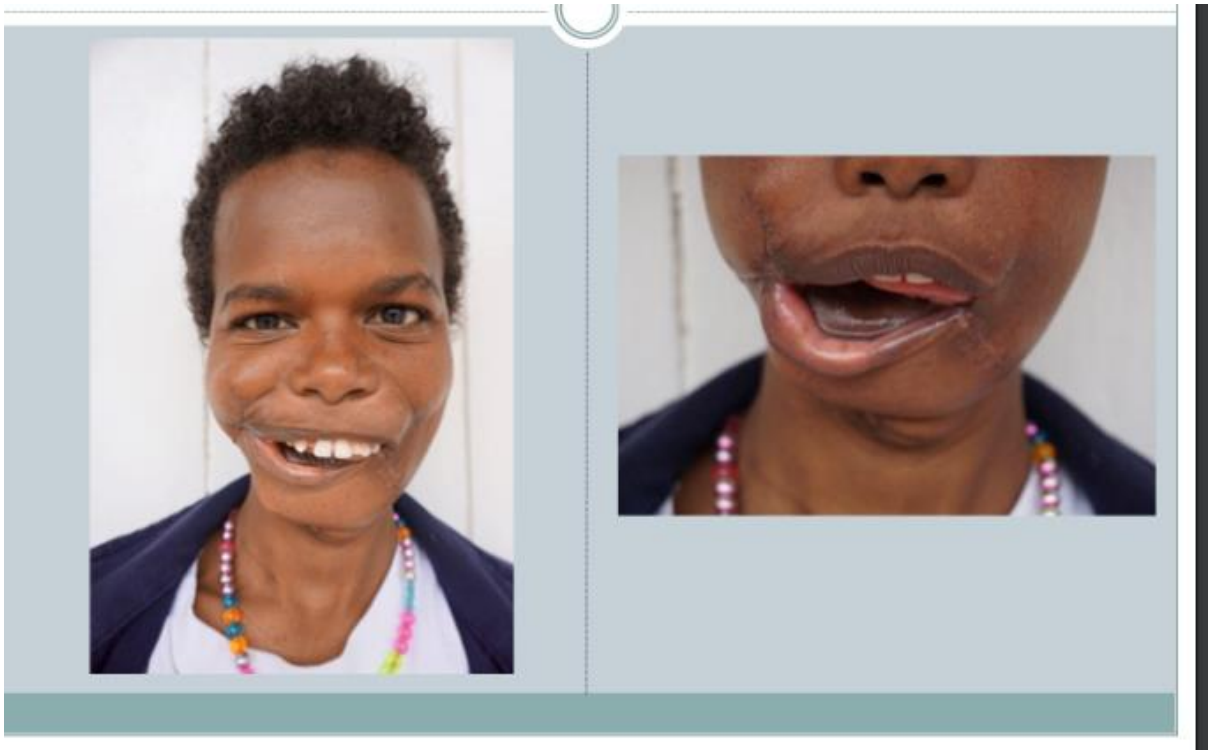
Mobilise muscle including undermining edges to give strong attachment. Use slower resorbable suture material (PDS/Vicryl) with horizontal bites (perpendicular to muscle fibres)

When placing deep sutures ensure consistent strong bite (just sub-dermal layer)

Exactly oppose vermillion border

This case required release of vermillion to get smooth opposition. Incision along vermillion border then securing with sutures

On Discharge



Day 4 - 10/10/17

Sintayhu Ayenawie

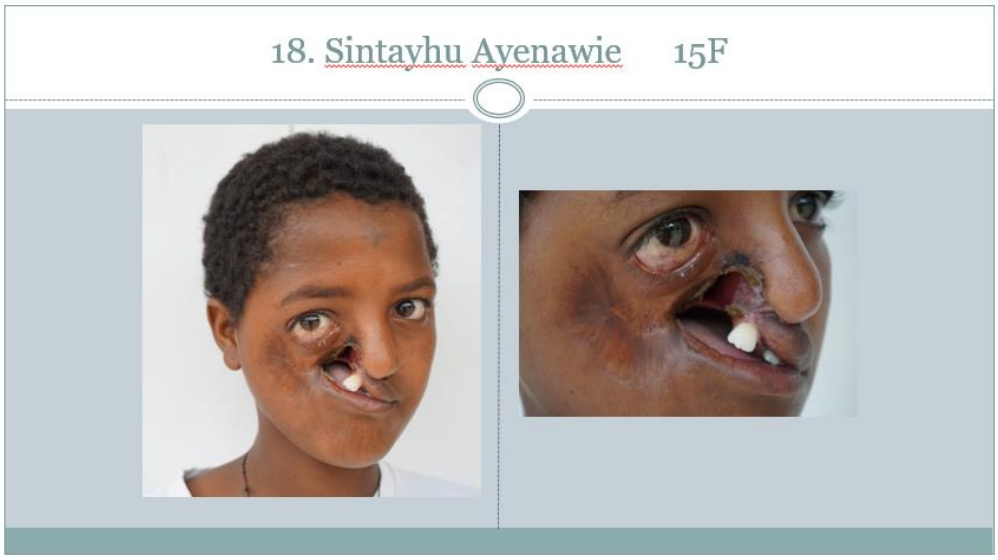
NEW NOMA

Defect right maxilla/nasal/upper lip

Mouth opening normal

Plan

Release of scar and recon with RFFF - Staged approach



Treatment

Excision of scar right maxillary/infraorbital region, right buccal rotation flap to palate, SR UR1/LR76543, Left RFFF, STSG Left thigh, Inset to defect, right canthopexy

Excision of scar right maxillary/infraorbital region, right buccal rotation flap to palate, SR UR1/LR76543, Left RFFF, STSG Left thigh, Inset to defect, right canthopexy

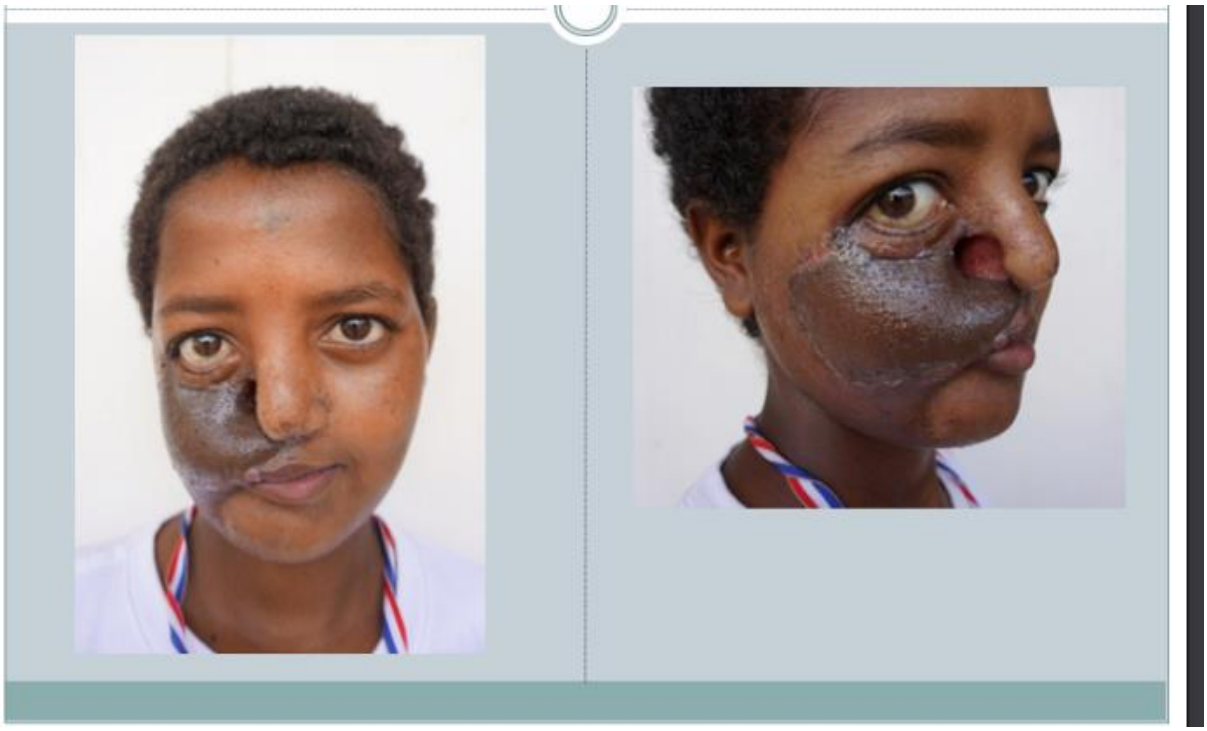
Assisted: RFFF, arterial and venous anastomosis, Scar division, inset of flap

Key points:

Large flap – this case 10x7cm. Harvested with cephalic vein to improve venous drainage possibilities. In this case it was not anastomosed as venous outflow was satisfactory from venae. The raising of the cephalic involved dissection separately to main pedicle and avoidance of peripheral nerves.

Inset was complicated due to the nature of the defect including buccal mucosa, upper and lower lips, nasal and cheeks. The inset began distally sealing he oral cavity and then progressed to the outer defect including areas of de-epithelialisation to give best cosmetic result.

On Discharge



Day 5 – 11/10/17

<u>Adine Mahmud</u>

NEW NOMA

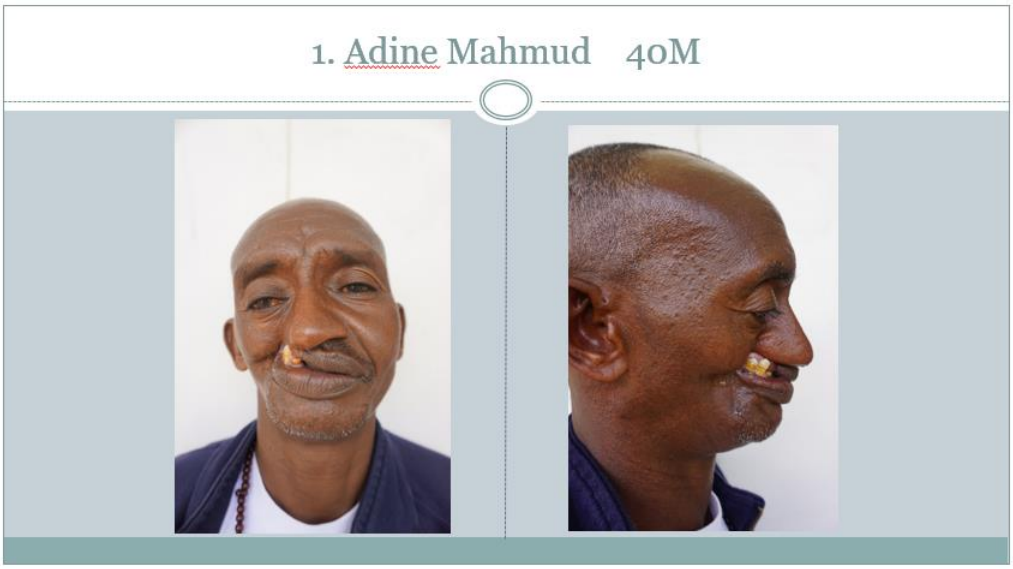
Bony fusion right coronoid/zygoma/skull base

Defect right lip and pre-maxilla

Complete trismus

<u>Plan</u>

Trismus release (bony release right/coronoidectomy left) Left RFFF/submental



Treatment

Release of trismus, bilateral coronoidectomy, resection of scar tissue left upper lip and maxilla, reconstruction with left RFFF

Release of trismus, bilateral coronoidectomy, resection of scar tissue left upper lip and maxilla, reconstruction with left RFFF.

Performed: Raising of RFFF including cephalic, harvest of STSG

Assisted: release of trismus, bilateral coronoidectomy, release of scar tissue, inset of flap

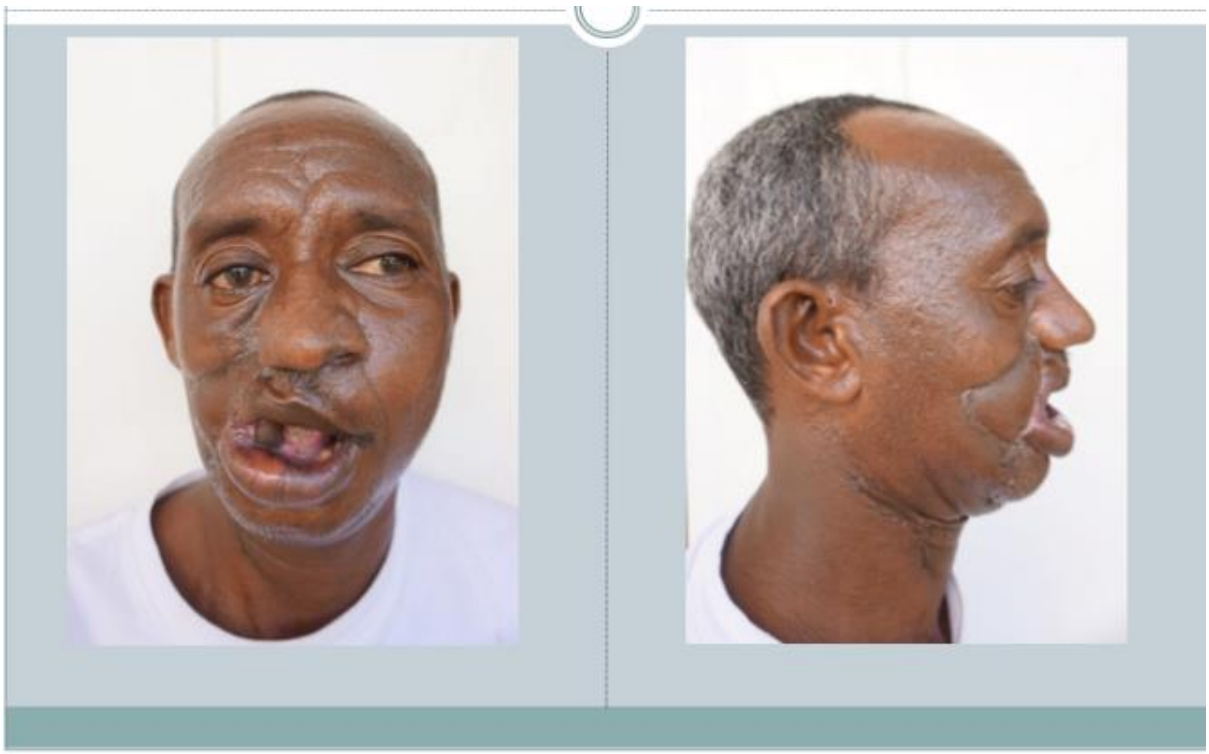
Key points: Solid bony fusion trismus with sigmoid notch difficult to initially access. Massive solid bone more than 2.5cm thick. Windows cut through bony fusion following likely course of mandible. This allowed for release of trismus once contralateral coronoid had been removed through lower angle incision.

RFFF performed with Mr Saleh. Flap raised as normal staring ulna to base then proceeding radial. Large flap 10x7cm including cephalic. Cephalic raised separately including any perforator that may progress to main pedicle. Flap positioned fairly central over cephalic to maximise drainage. Flap ran well with anastomosis of radial and cephalic.

Humby knife STSG left thigh: knife set up width of scalpel blade. Too large movements of knife led to gaps in flap and necessity of further graft. Keep knife movements small at set width to maximise cutting and uniformity of graft.

Complication: Tarsorrhaphy sutures left in situ during recovery phase leading to patient distress. Settled when released. Team discussion regarding incident held and eye sutures added to formal theatre count.

On Discharge



Day 6 -12/10/17

Shibru Haile

NEW NOMA

Complete trismus

Buccal defect left

Plan

Bilateral trismus release and reconstruction with submental flap

15. Shibru Haile 25M

Treatment:

Trismus release, bilateral coronoidectomy, scar resection, submental flap and inset

Trismus release, bilateral coronoidectomy, scar resection, submental flap and inset

Assisted: trismus release, scar excision, coronoidectomy and submental flap raising

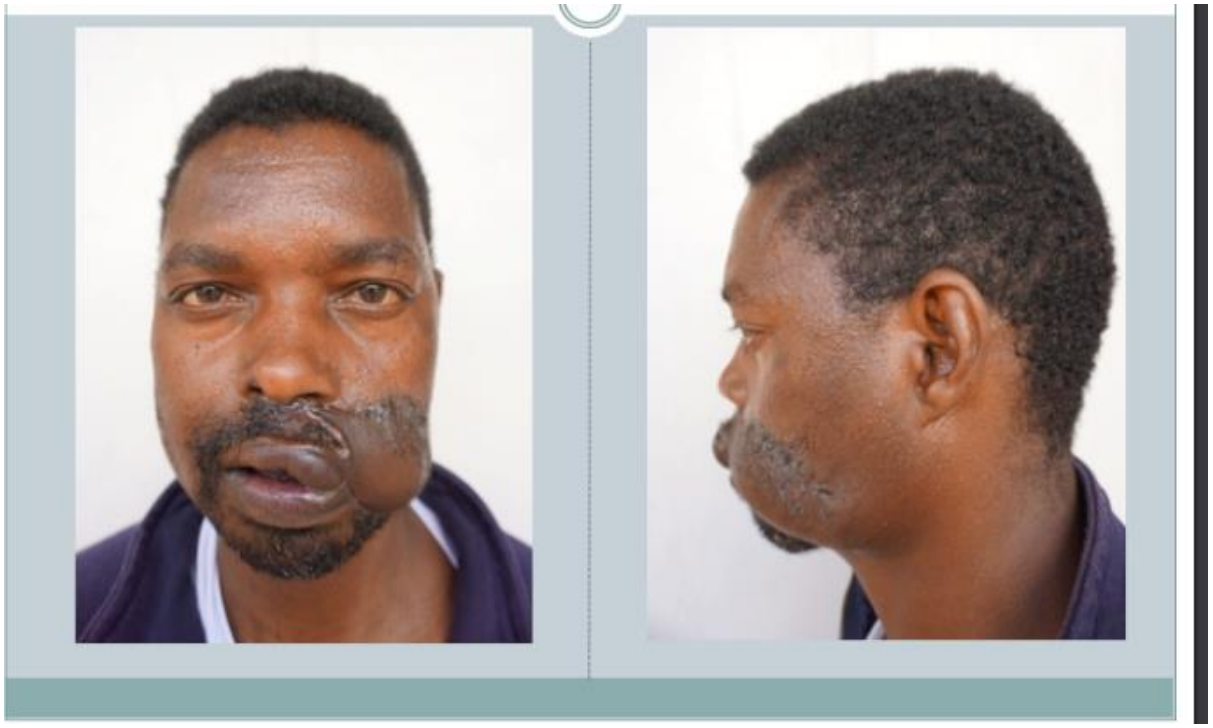
Performed: Flap inset

Scar tissue aggressively divided and excised. The intra oral exposure revealed complete bony fusion of mandible and maxilla with teeth inside bone. Sigmoid notch was accessible. Windows through bone with tooth removal gradually divided the fusion and allowed access to the right oral cavity. This was best performed with bur and saline aiming to follow path of presumed natural mandibular height. The thickness of the bone was huge >3cm. The coronoid also displayed gross hyperplasia.

The submental flap included bilateral mylohyoid muscles dissected off the hyoid leaving genioglossus in-situ. The dislocation of the SMG allowed for depth of dissection and protection of mm nerve. A robust flap with excellent blood supply and muscle bulk but limited extension. Good for consideration for FOM or lower lip/buccal defects.

The inset was technically difficult as suturing of the muscle to the remaining lingual mucosa was awkward. Mattress sutures gave more reliable attachment although trickier to place. Layered closure of the buccal wall gives a safety net in case of breakdown of internal sutures. Making the flap extend as far as possible gives future options in case of necrosis of the tip of the flap.

On Discharge



Day 7 – 13/10/17

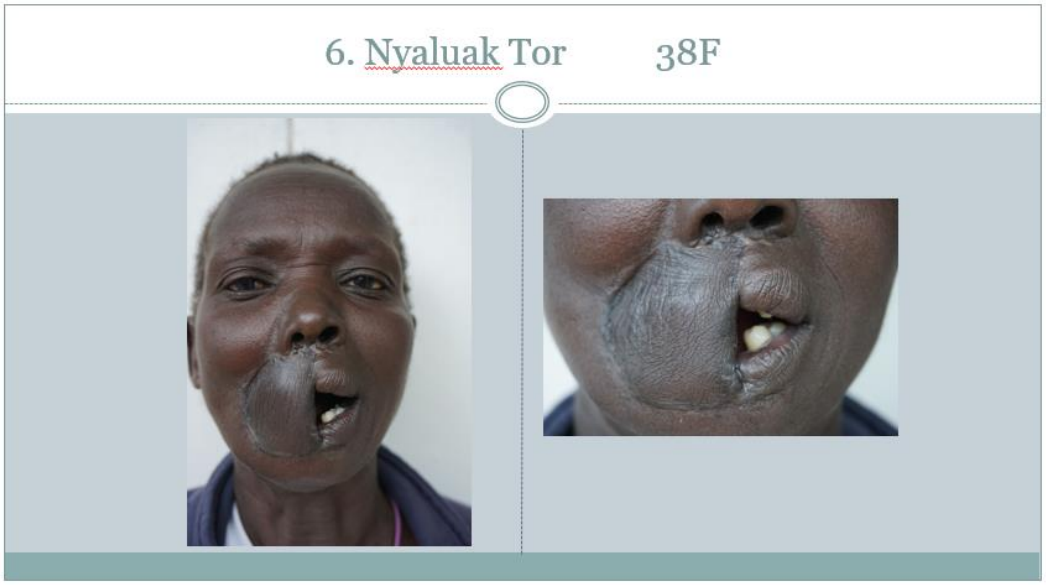
Nyaluak Tor

RFFF right buccal and commissure (rolled) (May 2017)

Main complaint difficulty eating

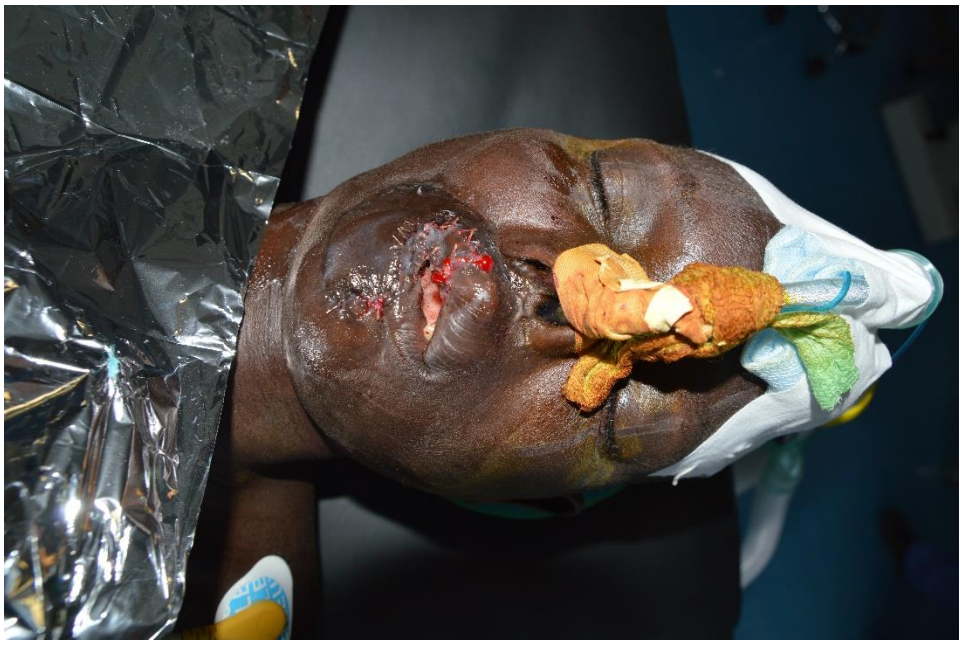
Plan

Division RFFF right commissure



Treatment:

2nd stage oral reconstruction including refashion of left upper and lower lips.



2nd stage oral reconstruction including refashion of left upper and lower lips.

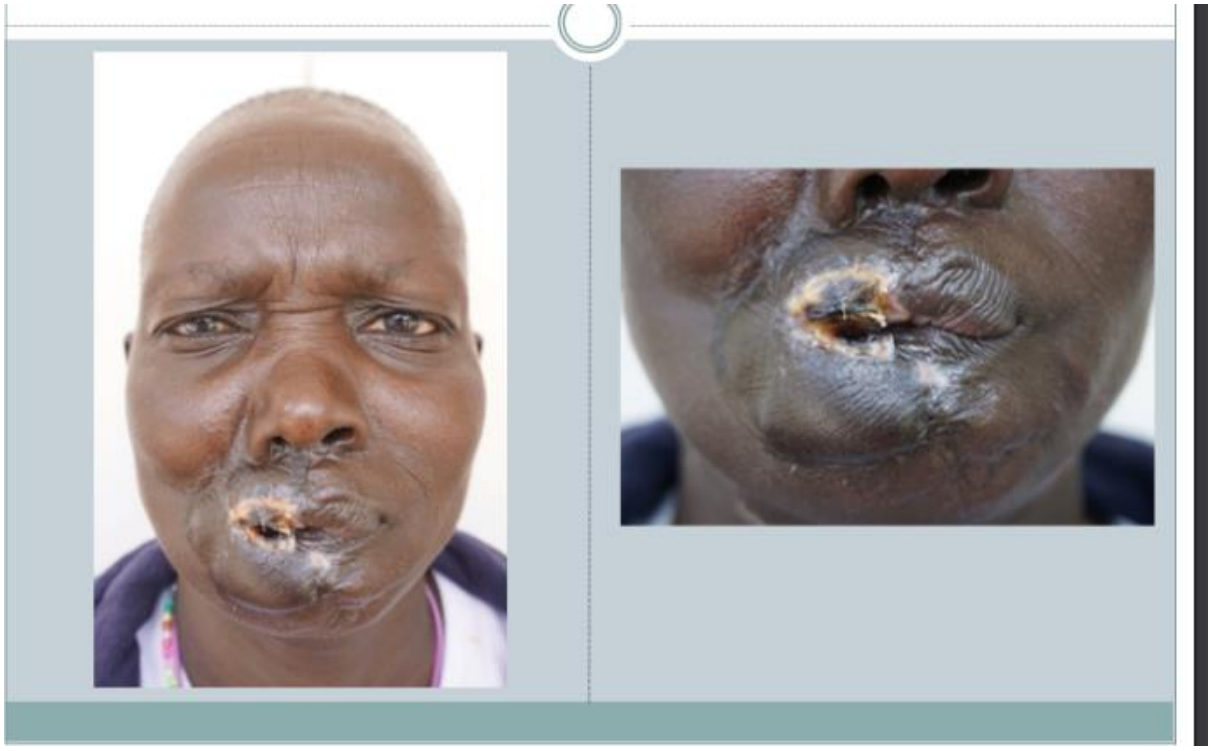
Assisted

Key points:

Although a seemingly very straightforward case at first impression it got much more complicated when all aspects were considered. The maintenance of lip bulk, vermillion border and competent lip seal all had to be considered.

Once the horizontal incision was made the outward roll of the lip showed that to get a good aesthetic and functional result a FTSG would be required. Interestingly there appeared too much tissue at the start but actually extra was required to get a full functional outcome

On Discharge



Samira Bari

Hyena bite treated with skin graft 06/17

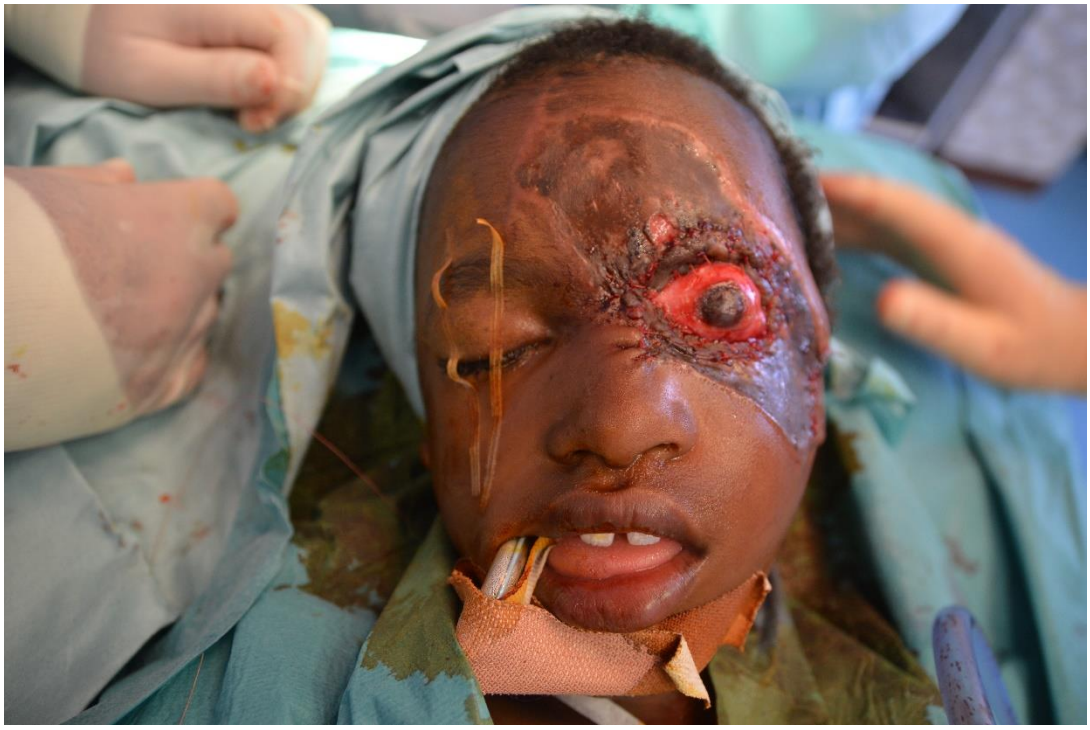
Non-functional left eye with ?discharging pus - clinically well

Plan

Consideration for enucleation left eye +/-skin graft

Treatment:

Debridement left eye graft and lid replacement with FTSG



Debridement left eye graft and lid replacement with FTSG

Assisted

Key points:

Mucosal tissue under graft had healed with constant discharge leading to granulation tissue and keratinisation of eye. Although the eye would never be functional her mother was adamant she did not want it removed.

Once debridement of old graft and mucosal tissue had been performed FTSG was harvested from the groin to replace upper and lower eye lids. It was felt that although the eye will not be covered and will never be functional it was preferable to perform this procedure and allow the patient and mother to come to terms with prospect of enucleation at a later date.

On Discharge

Day 10 – 16/10/17

America Molla 4yr old female

Presented direct to Hallelujah hospital with mother with pus from left face for 3 days

Pmhx: Noma 6 months ago left face. HIV positive. Treated with antibiotics, given nutrition and health advice and money for new housing and nutrition. Mother and child on ARV therapy

Examination: pus and fly larvae present left buccal mucosa. Swelling and difficulty opening left eye. No trismus. Unwell, floppy, dehydrated and malnourished

Imp: Recurrent NOMA, septic

<u>Plan</u>

Debridement +/-FTSG

Treatment

Debridement left cheek and maxilla under GA +FTSG left cheek and infraorbital region from left groin

Debridement left cheek and maxilla under GA +FTSG left cheek and infraorbital region from left groin

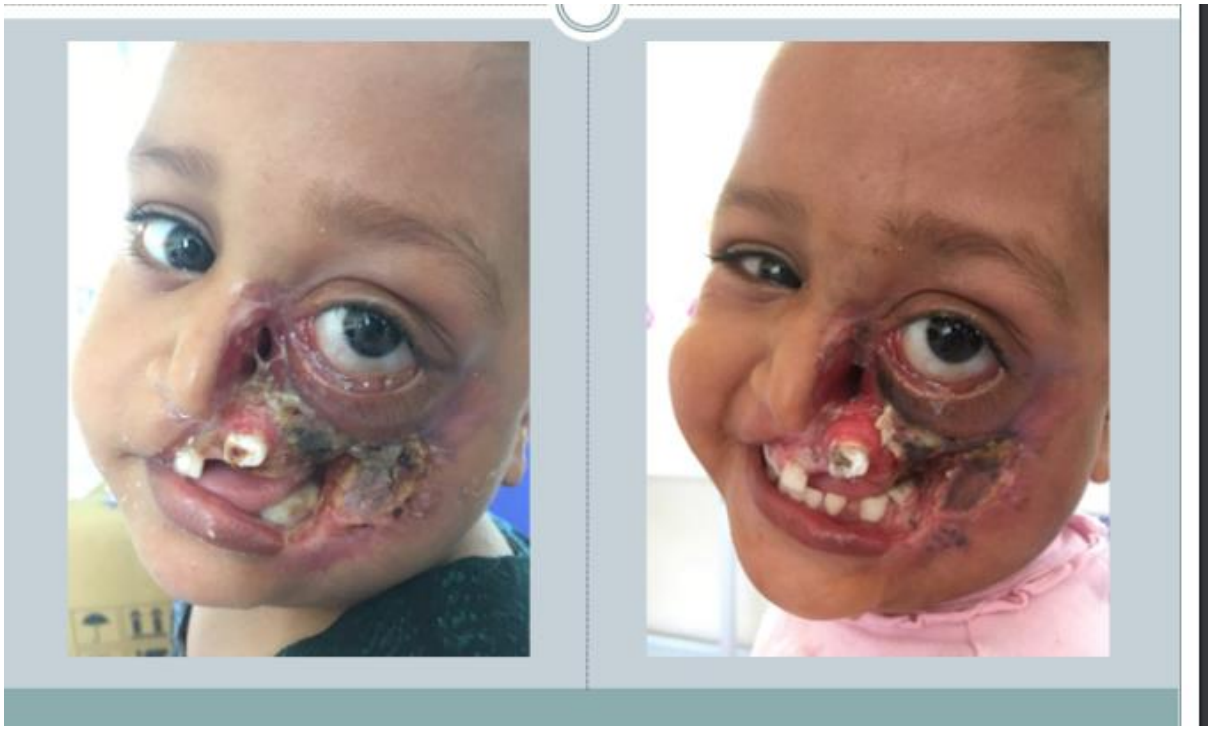
Performed under supervision

Acute infection settled, granulation tissue left cheek suitable for grafting. Much improved swelling around left eye. Skin graft taken and secured.

Key surgical points:

Aim to get coverage of granulating tissue to reduce future scarring. Although all of the graft may not take, a small amount is better than none. Also it may serve as a dressing to the exposed areas.

On Discharge



Ziritu Bushira

Returning ?Noma?acid?witch doctor treatment

Scapula and graft to lower eye lid May 2017

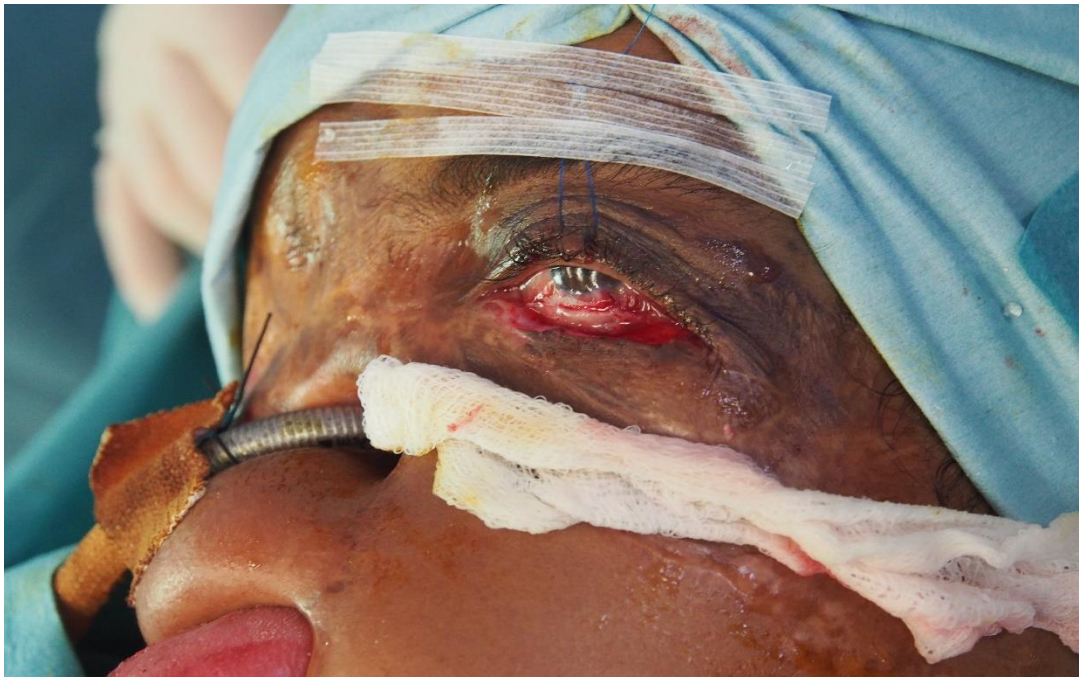
Bulbar conjunctiva risk to vision left eye

Plan

?palatal graft to left eye

Treatment

Lower eyelid reconstruction with mucosal graft and orbital rotation flap



Lower eyelid reconstruction with mucosal graft and orbital rotation flap

Assisted

Key Points:

Scarring had tethered the lower eye lid with keratinisation to level of iris. As the sight in the right eye was already lost it was of importance to try to preserve the left eye if possible.

Suitable accessible non-keratinised mucosa was readily available on the ventral tongue and this was secured to cover conjunctiva using 8-0 VR under microscope. The upper lid rotation flap was raised not to include levator muscles to preserve eyelid function. This was rotated via canthotomy incision to lower lip and lined with keratinised tissue from alveolar sulcus. The top portion of the flap was deliberately harvested to not include periosteum to allow folding of the position that would touch the globe.

On Discharge

Shimeles Shirma

17yrd old

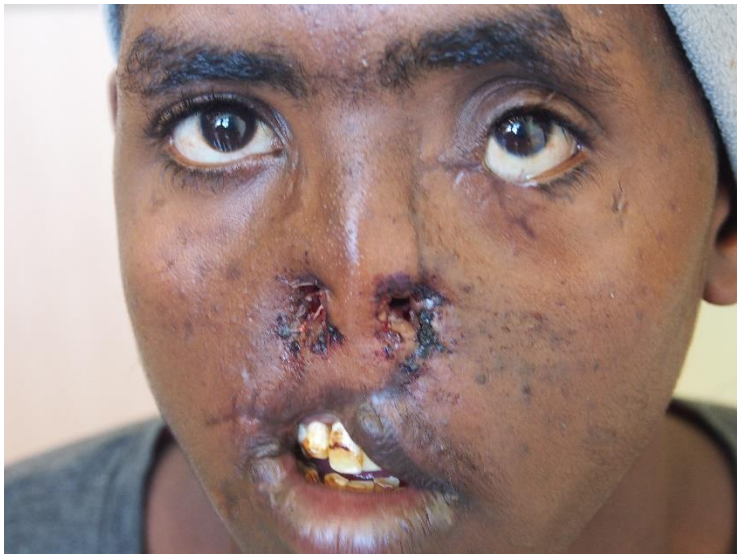
Hyena bite to face and scalp 10 years ago.

SG left scalp. Closure of defect on face

Incompetence right upper lip

Plan

Upper lip Reconstruction with local flap



Treatment

2nd stage reconstruction of right upper lip defect and scar excision

2nd stage reconstruction of right upper lip defect and scar excision

Performed with supervisor (KM)

Key points:

Excise scars at start – no guarantee they were correctly reconstructed at primary surgery. Once scars are excised and areas opened then try to work out management plan.

Good position of commissure and little defect to lower lip. Once upper left scar removed and mucosa mobilised although the upper lip could be reconstructed it would be short especially for any future nasal reconstructive surgery. Nasolabial region mobilised to give extra length through modified Z-Plasty.

Back cut along vermillion to line border with additional scars.

On Discharge

Day 11 – 17/10/17

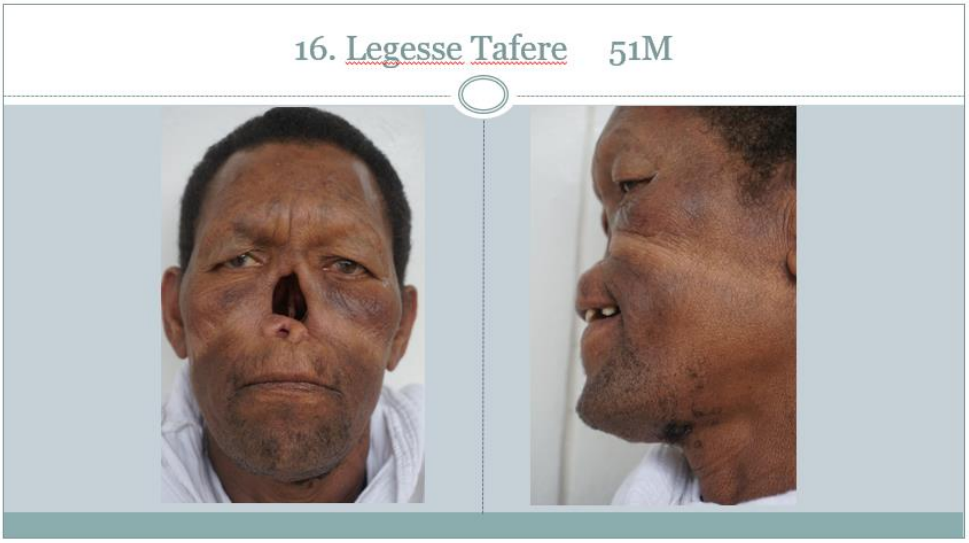
<u>Legesse Tafere</u>

Treated leprosy

Complete loss of external nose

<u>Plan</u>

Nasal reconstruction with rib and forehead graft



Treatment:

Total nasal reconstruction with right free rib graft and forehead flap

Total nasal reconstruction with right free rib graft and forehead flap

Assisted nasal preparation, raising of forehead flap

Performed: Harvest of rib graft and FTSG Right groin

Key points:

Mobilisation of skin to provide adequate lining for the inside of the nasal aperture

Large forehead flap to give plenty of tissue to manipulate skin for nasal recon.

Mark ribs and aim 7/8th rib. Cut down onto body of rib then incise periosteum along length. Careful elevation around rib to avoid inadvertent slipping into pleura. Once distal end free cut with saw/rib cutter, then direct visual dissection to sternum to gain maximal length. Cartilage can be cut with scalpel/monopolar.

Consider epidural catheter in situ as post op pain is significant.

Nasal reconstruction utilising screw holes and sutures to give adequate projection. All cartilage needs skin coverage.

Forehead flap raised as one stage procedure. Careful dissection around pedicle with frequent doppler checks to ensure viability of flap.

On Discharge

Day 12 – 18/10/17

Nuredin Mohammed

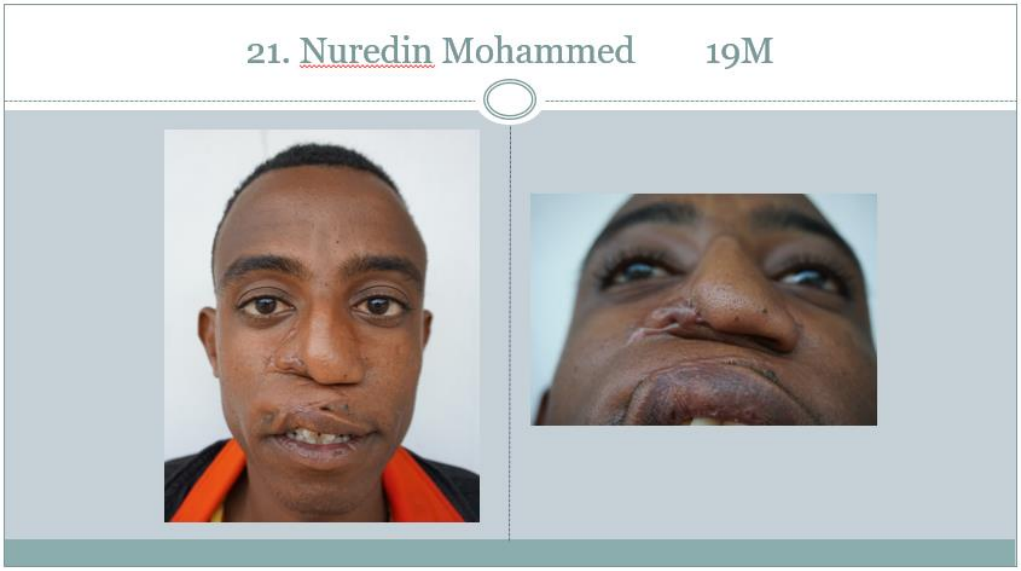
Treated Oct 2016 bilateral nasolabial (NOMA)

Main complaint reduced AE right nose

Collapse of septum

Plan

nasal strut and refashioning of right nose



Treatment

Columella Reconstruction with FTSG and cartilage graft from right ear

Columella Reconstruction with FTSG and cartilage graft from right ear

Observing

Key points:

More tissue than expected required for almost every reconstructive procedure. Take big flaps!!

Ear graft can be bent in midline to give bi-valve appearance and support.

Never excise excess tissue until reconstruction taking shape. Sometimes even poor-quality skin may be required for internal lining if rotation possible

On Discharge

Day 13 – 19/10/17

No operating booked for this day as left free for emergency surgery if required. No immediate surgical revisions required on this mission

Ward and theatres packed up, stock take done and patients moved to peripheral unit at Menagesha.

Surgical debrief and plans for future research/case reports made.

Day 14 – 20/10/17

All patients reviewed, wound checks performed, future plans and follow up confirmed.

Party with patients and all members of October 2017 Mission.

Mission Debrief meeting held with all team members in attendance (see end of this report for minutes).

Travel back to UK

Overall Reflection on Fellowship

The fellowship from conference call initial treatment planning to leaving Ethiopia has been an extensive learning experience. These have included surgical, medical, team building and cultural in nature; mostly positive but also some challenges. I will be able to take individual aspects from all of these and incorporate them into my working practice whether this is vermillion reconstruction or how to better understand the cultural needs of Sub-Saharan Africa patients. An example of this would be checking thorough understanding of consultations in clinic setting as enthusiastic agreement is not always correlated with understanding.

Strengths

Team working. I feel comfortable communicating and working as part of teams however the need to quickly understand roles and skill sets was required to maximise efficiency on the mission. Some members had been on missions in previous years and for some it was their first. I felt I played an active part in team bonding and positively affected the mood of the trip and hence the overall enjoyment of the team

Organisation. I undertook the role of documenting patient journeys throughout the mission. This involved documenting the key points for each patient from initial consultation to theatre. I produced up-to-date theatre lists and made sure all members had a copy. I feel this helped with the smooth running of the theatre sessions. The use of slides at morning briefing made sure everyone had a clear understanding of the day's activity.

Areas for Improvement

Surgery. Surgery is always a learning experience at every career stage. Coming as a background of 3rd year registrar enabled me to absorb a huge amount of detail from every case. One area I have improved but need to also work on is visualisation of the final result. This was apparent to me when discussing cases on the conference call in the UK and when treatment planning in Ethiopia. An element of this will improve with experience but I feel I could work on this with more detailed discussions to pick consultants ideas before procedures on a regular basis.

Knowledge. Prior to the mission I read about the main conditions I expected to encounter, however this did not quite correlate to the conditions seen. For example, I had not seen encephaloceles or read in depth the key pints related to their management. This highlights areas I need to work on for both final exit exam and also future work with this charity.

Dressings. The vast array of different wound dressings available and the combinations used by different departments has made me confused about the best approach for each situation. I need to try and simplify the product into groups and understand the basics of post-operative wound management in more detail. This would give me more confidence when applying and advising their use.

Development needs

Attendance at dressing clinics with specialist nurses relating to OMFS and plastic surgery to learn comprehensive dressing techniques.

Further detailed reconstructive practice. This should include detailed planning and reflection.

Participation in future missions to increase experience.

Future areas of work to be completed

Presentation at Noma conference March 2018

Publication relating to Trismus in Noma including classification

Publication of recurrent Noma case

Facing Africa October 2017 – 20/10/17

Debrief Meeting Minutes

In attendance:

Chair – Kelvin Mizen, Chris Lawrence, Dan Saleh, Rob Wotherspoon, Jonathan Reid, Bill Hamlin, Ian Stanley, Claire Baylis, Gro Hotvedt, Fiona Stainthorpe, Alice Herrington, Leona Burger, Elaine Eruenah, Ali Ghazanfar, Terry Lawrence, Angus Mack, Kidist Kebede, Tihtna Tafete, Jane Briggs, Emily Lowe

Chair Intro and Welcome (KM)

General thanks expressed to all members of the team on a well run and enjoyable mission. Aims of meeting explained to cover positive and negative experiences and possible future improvements.

Anaesthetists (IS/CB)

Positive aspects: Good team working and excellent inter team communication, possibly linked to the smaller than normal size of total team.

Timing of team brief before ward round enabled a prompt theatre start time and good momentum to be maintained throughout the day.

Possible Improvements: A new anaesthetic chart would provide clearer information (**IS/CB/BH to action for next mission)**

Concerns raised: Specific instruction to Ethiopian ward nurses not always followed. e.g infusion pumps being altered overnight. More instruction maybe required to avoid this.

Not all drugs available for management of acute anaphylaxis or LA toxicity. This will be addressed for next mission **(IS/CB/BH to action)**

Pharmacopeia (BH) Consolidation of pharmacopeia now complete from previous missions. Alterations will continue including LA toxitcity and availability of antibioitcs (e.g. co-amoxiclav)

Chair response (KM) Team size similar to previous missions despite running of one theatre this time. Further debate required outside this forum to decide on whether 1 or 2 theatre working provides better care and outcomes.

A conference will be arranged for all members of missions to disseminate information and ideas. This will be arranged shortly (**KM to action)**

Surgeons (JR/DS/RW)

Positive aspects: Satisfaction expressed to the timing of patient arrival and availability of necessary reports

Theatres up to standard and functional

Generally good levels of equipment

Appropriate level of nursing care generally on ward

	Good case mix and planning. No major changes from initial discussions
	WHO checks and team brief useful safety features and well performed
	Proximity of ward to operating theatre helped provide inclusive atmosphere and appropriate patient review
Improvements	Some items of equipment not available (**JR to discuss equipment list with AG and LB)**
	Occasional issues with ward dressings but no patient harm occurred.
Comments regarding equipment (CL/KM)	Database of equipment held with Dalia and this can be accessed with username. Also if further equipment required direct discussions with reps can be beneficial
Comments regarding ward round (IS)	Surgeon led ward rounds found to be very beneficial to overall patient care and time management.
Comments from Trainee (RW)	Thanks expressed to whole team for their support in training process. A steep learning curve but invaluable to future career.

Ward Nurses (FS/AH/EE)

Positive aspects	Hospital layout helpful with combination of 1 and 2 bedded bays and proximity of all team members
	Cleanliness of clinical areas very good
Improvements	Hallelujah Hospital paperwork sometimes cumbersome. Facing Africa note paperwork is more suitable and HH did not want copies or patient records at end of mission. (**Action – use Facing Africa record paper)**
	Some patients have similar names and some confusion was found especially relating to sending for correct patient from Cheshire. Utilisation of ID number would be helpful as on previous missions. **(Action 1. wrist bands and existing checklist to be utilised by Cheshire staff prior to patient transfer. 2. Consistent use of designated patient number and name by all members of team throughout patient journey)**
	Written ward round instructions would avoid potential miscommunication between team members (**Action – clear documentation to be completed by ward round team)**

Theatre Nurses (FB/AG)

Positive aspects	Generally satisfactory level of surgical equipment and theatre hardware

	Prompt and in-depth team brief effective and useful
Improvements	Drills and saws in need of servicing **(Action - TL aware and will have completed for next mission)**
	Some labelling issues relating to equipment in crates. TL aware and re-affirmed the importance of accurate documentation when packing storage crates.
New 3rd saw (CL)	New 3rd saw has been donated – has it been of use? Unfortunately, KM and FB confirmed it is too unwieldly for use in Head and Neck Surgery and will not be of use. **(Action- CL to discuss with alternative charities in Addis about donating)**
Hand held Doppler (DS)	No availability of hand held doppler although there should be 2 in equipment store. EL confirmed they are at Cheshire **(Action – DS and EL to locate dopplers and ensure correct packing)**

Cheshire Staff (EL)

Positive aspects	Have felt supported by team from initial email contact to visits during the mission from ward nursing staff.
Improvements	Issues raised regarding arrival of patients after initial surgical team visit
	Concerns raised regarding lack of emergency medical supplies e.g. anaphylaxis/resus treatment

Discussion regarding availability of emergency medication at Cheshire (EL/KM/IS/DS)

IS-	Due to remote nature of Cheshire base any treatment of life endangering anaphylaxis will be futile as closest staffed ambulance would be more than 45mins away
DS-	Concerns raised that if not all possible actions and precautions taken then Facing Africa and/or medial staff could be involved in SUI
KM -	General issue of pathway for any medical emergency raised – Nordic hospital agreed to be best 1st contact if any true medical emergency.
IS and KM-	Agreed at present Basic Life Support should be limit of care at Cheshire until advanced medical support arrives
Action required – 1. GH and EL to draw up emergency pathway for medical emergency at Cheshire	
	2. IS to investigate level of emergency equipment held by other remote medical units

Admin staff (CL/TL/KK)

Thanks expressed to all team members for their hard work and great trip. Thanks also extended to Jane for teaching and spreading the word of Facing Africa over past 2 weeks.

Thanks particularly extended to KK who is leaving her role as country manager which she has held with distinction over past 3 years.

Welcome to Salam who will be taking over this role in Ethiopia.

Any Other Business

- **One theatre operating (KM**) - Running one theatre has enabled smoother coordination and improved teaching conditions. Debate regarding running of 1 or 2 missions in future will be held another time
- **T-shirts (IS)** logo is available and if any member would like a T-shirt/sweatshirt then to email IS
- **Christmas Cards (KM)** Discussion on whether fund raising cards would be possible to restart. CL agreed that would be possible and he will arrange
- **Training of Local Nurses (JB)** Some training of the local nurses prior to patient arrival would be beneficial **(Action – TT to investigate whether this could be arranged for next mission)**
- **Difficulty to predict patient arrival times (CL/TT) –** Cultural issues makes patient behaviour difficult to predict leading to relatively high dropout rate. Aim will be 50 new NOMA to get full operating numbers.
- **Treatment of Ameloblastoma (TT/KM) -** Discussed possibility of treating large ameloblastoma patients. As this is not the focus of the charity these cases should be limited to max 1 or 2 per mission due to their complex planning needs.

Closing Remarks (KM)

Thanks expressed to all team members for a successful and enjoyable mission. Next Mission will be in May 2018 with a conference to be held in March 2018.

Trainers report for Mr Rob Wotherspoon

Surgical Fellow in Facial Reconstruction in Noma.

October 6th to 21st 2017.

Mr K D Mizen Consultant Oral & Maxillofacial/Head & Neck Surgeon.

Lead Surgeon Facing Africa

Trainee report for Mr Rob Wotherspoon.

Noma Surgical Fellowship for Facing Africa 6th to 21st October 2017.

Introduction.

Facing Africa(FA) is a UK based NGO which deals mainly with a condition called Noma.

Noma (cancrum oris) is an acute and ravaging gangrenous infection affecting the face. The victims of Noma are mainly children under the age of 6, caught in a vicious circle of extreme poverty and chronic malnutrition.

Facing Africa currently funds two teams of highly skilled and experienced volunteer surgeons from the UK, Germany, France and Holland to Ethiopia each year to perform complex facial reconstructive surgery on the victims of the disease Noma. Each team is made up of 3-4 Consultant surgeons (plastic, maxillo-facial and cranio-facial), 3 anaesthetists, an anaesthetic assistant, 3 operating room nurses, 3 ward nurses, a "junior" doctor and 2 wound care nurses. Each surgical mission spends 2 weeks in Ethiopia and generally carries out 35 – 45 facial reconstructions. The cost of each mission is around £ 75,000.

In addition to the surgery, Facing Africa also encourages local doctors, surgeons and nurses to attend lectures and presentations done by our volunteers in order to teach them new and better procedures and techniques. Ethiopian surgeons and anaethetists are invited to observe and assist during surgery. Facing Africa also donates surgical instruments, consumables and disposables to Ethiopian hospitals at the end of each mission.

In addition rather than fly in, fly out surgery there is a well organised process of pre & post op care which spans the missions. This tends to be 2 weeks of optimisation of the patients with a subsequent 6 weeks of care once the main team have left.

Recently, funding has been granted for an Anaesthetic trainee to attend as an Noma airway fellow. This has been extremely successful & we have had to date 3 Fellows on the missions. They have all benefit greatly in this experience both clinically & academically.

We were fortunate that the Trustees of FA agreed to allow a trainee surgeon to attend this mission. It is usual for only highly experienced Consultant surgeons to attend.

Funding was applied for in the form of a grant for £1,500 from BAOMS which was successful.

Team Members.

Kelvin Mizen, Lead Surgeon

Chris Lawrence, Trustee & CEO FA

Dan Saleh, Consultant Plastic surgeon

Rob Wotherspoon, Noma Surgical Fellow

Jonathan Reid, Consultant OMFS

Bill Hamlin, Anaesthetics

Ian Stanley, Consultant Anaesthetics

Claire Baylis, Consultant Anaesthetics

Gro Hotvedt, ODP/Nurse Anaesthetist

Fiona Stainthorpe , Lead Ward Nurse

Alice Herrington , Ward Nurse

Leona Burger, Lead Theatre Practitioner

Elaine Eruenah, Ward Nurse

Ali Ghazanfar, Theatre Practioner

Terry Lawrence, Trustee

Angus Mack, Trustee

Kidist Kebede, Ethiopian Manager

Tihtna Tafete, Ethiopian nurse

Jane Briggs, Visiting doctor.

Emily Lowe, Junior Doctor Cheshire home

Summary of clinical work 6/10/17 to 21/10/17.

Prior to the mission Rob expressed an interest in coming to learn about Noma surgery & facial reconstruction. To this end we applied to BAOMS for funding for a travelling fellow for £1,500 & were successful. We also sought permission of the TPD Mr Kanak Patel to include this as part of his training.

In the weeks leading up to departure information regarding potential patients was relayed to the team via email. A conference call was held to discuss these & further discussions held on an ad hoc basis via email & Whatsapp. Rob was involved in these.

Rob was assigned myself as his AES for the duration of the trip. He was also under supervision of the 2 surgeons DS & JR. All other members of the team acted as supervisors in their various roles.

I guided Rob through the various processes to gain a business visa & to become registered by the various hospital & Government bodies in time for the trip. This helped him gain some understanding of what type of processes are involved in just gaining permission to work in an African country.

Duties on the mission.

Day 1

On the first day on arriving at Addis we were immediately taken to Facing Africa house in Menagesha which is a Cheshire Home where the patients are optimised preoperatively.

All potential patients were reviewed. They are a mix of new & returning patients to be assessed with varying conditions. The majority are Noma, but others included benign tumours, Hyena bites, burns, Facial clefts the majority of which were myelomeningocoeles & haemangiomas. The returning patients were usually post op patients being reviewed for either discharge or further planned, staged surgey.

Rob had the opportunity to examine all of these patients. 34 patients were seen including new Noma, old Noma, hyena bites, facial burns. 12 patients suitable for primary and secondary reconstructive procedures. Various other assessments made of patients presenting with other defects including Tessier cleft, encephaloceles and plagiocephaly.

He was informally assessed on these either at the time or during subsequent weeks.

Rob was expected to record each patient`s details along with photographs & produce a record of each patient`s journey. This was completed.

Day 2

This was the Sunday morning where all the patient`s details, history & photos were collated. Rob was asked to facilitate the meeting which included most of the team to plan the week`s operations & draw up a provisional. This included ensuring that the AV was working & the enviroment was suitable. Not an easy task in Ethiopia. He kept good records & produced the operating lists as requested & liaised with all staff to ensure the correct patients were sent for from Facing Africa house at Menagesha. This was critical as the journey into Addis is over an hour with only 2 trips per day.

Operating days.

Rob was expected on every ward round which was held morning & evening seeing both the pre & post op patients.

He would then lead the team brief.

<u>Surgery.</u>

Theatre Lists for FA Mission.

Week 1 (9-13/10/17)

Monday	Tuesday	Wednesday	Thursday	Friday
Fayou Abdusalem Debulk soft tissue flap left cheek (GA Size 6 nasal OK airway)	**Sintayu Ayenawie** Scar excision right cheek and left free radial forearm flap	**Adine Mahmud** Bilateral trismus release scar excision and left radial forearm free flap	**Shibru Haile** Bilateral trismus release + Submental flap	**Nyaluk Tor** Divide and reconstruct right upper and lower lip flap (GA Asleep nasal) **TFTs Hypertension/Protein**
ZInash Ali Wedge excision lower lip Debulk FOM flap (GA nasal tube)	**Sintayu Ayenawie** Scar excision and left free radial forearm flap (GA Left nasal tube good mouth opening / NG/ Urinary catheter)	**Adine Mahmud** Bilateral trismus release scar excision and left radial forearm free flap (GA AFOI with FONA / NG/ Urinary catheter) **U+e CHECK**	**Shibru Haile** Bilateral trismus release + Submental flap (GA AFOI / Urinary catheter / NG)	**Samira Bari** Debridement left oribt +/- enucleation of left eye +/- skin graft

Week 2 (16-21/10/17)

Monday	Tuesday	Wednesday	Thursday
America Molla Debridement left face	**Legesse Tafeye** Total nasal reconstruction with rib graft forehead flap (GA – Oral Rae)	**Nuredin Mohammed** Columellar reconstruction (GA – Oral Rae)	
Zirutu Bushira Left peri-orbital reconstruction buccal graft and HT flap (GA – Nasal intubation / Glycopyrolate)	**Legesse Tafeye** Total nasal reconstruction with rib graft forehead flap (GA – Oral Rae)		
Shimeles Sirma Reconstruction of upper lip region			

The 2 lists are the type of cases with which Rob was involved. These included Noma, both active & Old, Post op tumour surgery, Hyena bite, Cutaneous Leishmaniasis & chemical burn sequelae.

Rob performed & directly assisted in procedures under direct supervision of Consultant surgeons, this included

Raising large Radial Forearm free flaps on the deep & superficial venous system,

Harvesting rib for nasal reconstruction

Taking full & split thickness skin grafts & managing complications.

Harvesting ear cartilage for nasal reconstruction in particular columnella

Flap inset in complex reconstruction for large facial defects

Bony trismus release

Coronoidectomy

Forming nasal skeletal reconstruction

Reconstruction of eyelids with local flaps & grafts

Academic teaching.

With each of the above cases Rob underwent tutorials on the principles, indications & complications of all of the above. He was also expected to read up on the procedures the day before surgery.

He was in the privileged position to see active recurrent Noma, rarely seen by Ethiopian doctors let alone Western ones. He also assisted in the subsequent resuscitation & treatment of the young patient.

He managed to obtain a paper on recurrent Noma & is now going to write this rare case up.

The girl has been discharged to her home.

Rob received a tutorial on Facial Haemangiomas specifically after examining a patient who attended ad hoc during the trip. I think he found this very challenging. He identified areas of knowledge which need addressing.

Following the mission Rob is expected to write on several subjects. Which are to be completed by the end of the year.

Case report on recurrent Noma.

Surgical management algorithm of trismus.

Report of mission for BAOMS & Facing Africa. Completed

Minutes for meeting of Facing Africa team debrief. Completed

Presentation at the 2nd international FA Noma meeting March 17th 2018.

Final day 20/10/17.

The final day consisted of a Grand round at the Menagesha Facing Africa House.

This is where all the patients are reviewed & examined for assessment of wounds, complications & onward planning for future missions, this may include discharge.

Rob along with Emily were expected to lead & record all decisions made.

Rob was asked to review & undress some wounds himself, this identified the need to attend some nurse Lead wound clinics.

Comments from Mr Saleh

Yes. I think very organised and took it seriously, appropriately. Saw a good case mix and also, to me, seemed a safe surgeon when raising flaps etc.
He helped smoothly running on the WHO checks too.
Well done

Summary

Rob was the first Noma Surgical Facial Reconstruction Fellow. Overall Rob acquitted himself very well. He was an excellent team member & fitted into a highly skilled team easily.

He undertook tasks given to him & in a timely manner.

He gained great experience in examining & managing conditions occasionally seen in the UK but common on a world wide perpsective.

This included:

New noma,

Old Noma

Hyena bites & delayed presentation of facial injuries

Facial burns.

Tessier cleft,

Encephaloceles

Plagiocephaly.

Facial haemangiomas

HIV infection

Leishmaniasis

Syphilis.

It widened his experience of many aspects of facial reconstruction not just that limited to the Maxillofacial region alongside harvesting flaps & grafts associated with this.

It also identified current & future learning needs which included:

Wound care

Assessment & management of facial haemangiomas

Complex flap insets

Nasal reconstruction

Eyelid reconstruction

Overall Rob gained a wide experience & acquitted himself well. He is to be congratulated.