Report

Primary Trauma Care Course

Gondar, Ethiopia

June 2015

Respectfully submitted

Dr. Mensur Osman (Course Director)

Dr. Richard Simons (Visiting International Faculty)

Gondar University Hospital in Gondar, Ethiopia hosted its third Primary Trauma Care (PTC) course on June 29th – 30th, 2015. Two previous back-to-back PTC courses had been delivered in Gondar in August 2014 under the direction of Dr. Laurence Wicks from the University of Leicester. An instructor course was also done at that time.

Course Faculty: This course was the first local, independent course, organized and taught entirely by the local faculty, excepting a single visiting international surgeon from Vancouver (Dr. Richard Simons) who taught some of the sessions. The course director was Dr. Mensur Osman who had done PTC training in Addis and was closely involved in the 3 previous Gondar courses. All course faculty had previously taken the course and instructor training, again with the exception of Dr. Simons who is an ATLS instructor and who had familiarized himself with the PTC course content beforehand. Names of faculty are listed in table 1, Dr. Mensur Osman seen introducing course on front cover of report.

Table 1. PTC course Instructors /Faculty

Name	**Email**
Mohammed Kedir	Muheet2000@yahoo.com
Mensur Osman	omensur@yahoo.com
Solomon Yirdaw	solyirdaw@yahoo.com
Mohammed Alemu	omdalem50@gmail.com
Desyibelew Chanie	desyibelewchanie@yahoo.com
Ashenafi Berhanu	ashe_mama@yahoo.com
Muhammed Yesuf	muhayes@gmail.com
Hailekiros Amare	amaretom22@gmail.com
Habtamu Getinet	getineth@yahoo.com
Richard Simons	richard.simons@vch.ca

Course participants: Course participants were drawn from the local programs and for the most part were residents from the Gondar surgery residency program. In addition, 2 local anesthetists and one international surgical resident from Vancouver also participated. There was a variety of knowledge and skill levels in the group as evidenced by the pretest results (range 12-20), although this did not detract from the teaching experience and students were both surprisingly interactive as well as mutually supportive. A list of participants is presented in table 2.

In addition to the listed participants, a trauma nurse from Vancouver (Ms. Tracey Taulu) and a Gondar Trauma Unit nurse audited the course with a view to assessing the

suitability of the course content for use in a nursing trauma training course to be presented later in the week (see attached report).

Table 2. PTC course Trainees

Name	Email
Dr. Miklol Mengistu	miklol.mengistu@yahoo.com
Dr. Siyasebew Mamo	siyasebew@yahoo.com
Dr. Zerihun Geresu	zedgerssu@gmail.com
Dr. Berari Bayou	berarib@yahoo.com
Dr. Mezgebu Bogale	mezgebubogale@yahoo.com
Dr. Yikunoamlak Melku	yihunoamlakm@yahoo.com
Dr. Endris Mohammed	andrewmoha2010@gmail.com
Dr. Yitagesu Aberra	aberrayitagesu@yahoo.com
Dr. Fentahun dires	Dires.Fentahun@gmail.com
Dr. Shiferaw Desta	Shiferaw_desta@yahoo.com
Dr. Workye Tigabie	Workye62@gmail.com
Dr. Dessie Yirdaw	desyirdaw@gmail.com
Dr. Shahrzad Joharifard	sjoharifard@gmail.com
Mr. Yopthahe Woldegerima	wyophtahe@gmail.com
Mr. Mamaru Mollalign	mamaru.mollalign1990@gmail.com

Course content and format: Although the 2015 version of the course had just become available on the website, the previous version was used for this course with close adherence to the lectures, skill stations and interactive sessions in the recommended order and format. As stated, the level of interactivity, both from the faculty and participants was good leading to a lively and enjoyable course. Many excellent questions were posed, particularly in the interactive sessions, where there was a high level of willingness to participate and get thoroughly into the spirit of the sessions and scenarios.

Materials for skill stations were provided locally and were generally adequate though could be improved and augmented over time for subsequent courses. Airway mannequins and equipment were readily available (Fig 2) and both lecture and skill station were well taught by local anesthetist Mr. Amare. The chest tube skill station was taught by Dr Solomon and centered around the provided PTC course video along with

discussion but the session could have been improved with some equipment hands on and, ideally, a full simulation. C spine collars of various types were available but there was no spine board for demonstration which should be rectified before the next course.

Course Budget: A detailed course budget is not available at this time. Previous PTC courses had been supported by the PTC Foundation although funding from that source was not available for this course. The Branch for International Surgery at UBC agreed to underwrite course expenses up to a maximum of $1500 Canadian covering all direct course expenses including stationery, catering, printing, etc. No stipends were offered to participants as all were local and the majority were trainees. Faculty stipends were to be funded locally. The course was delivered in the CNIS building on the GUH campus at no expense. Catering was off site and excellent.

Participant Evaluation: Participants were evaluated entirely on their performance in the MCQ pre- and post- tests as per the course design. Post scores reflect an overall improvement in trauma care knowledge with a leveling of performance within the group – i.e. the weaker students (based on pre-test scores) achieved results closer to the higher performers in the post test (range 17-20). Level of performance within the scenario skill stations was variable though this did not enter into the final student evaluation. Future potential instructors were informally identified based on their overall performance, level of engagement and enthusiasm. Pre and post course test Scores are listed in Table 3.

Table 3. PTC Test Results

Name	Before course	After course
Dr. Miklol Mengistu	19	19
Dr. Siyasebew Mamo	19	20
Dr. Zerihun Geresu	17	20
Dr. Berari Bayou	18	19
Dr. Mezgebu Bogale	19	20
Dr. Yikunoamlak Melku	18	19
Dr. Endris Mohammed	18	19
Dr. Yitagesu Aberra	17	19
Dr. Fentahun dires	17	19
Dr. Shiferaw Desta	19	19
Dr. Workye Tigabie	13	17
Dr. Dessie Yirdaw	16	18
Dr. Shahrzad Joharifard (UBC)	20	20

Mr. Yopthahe Woldegerima	18	20
Mr. Mamaru Mollalign	12	18

Table 4. Course Feed back

1. **Post-Course Confidence Matrix: –** 15 respondents

		1	**2**	**3**	**4**	**5**
A				3	5	7
B					7	8
C				1	5	9
D				3	7	5
E				1	6	8
F				1	6	8
G				3	5	7
H					3	12

(Frequency of responses given for each row of questions)

2. **Post-Course Trauma Management Questions** – 14 respondents

a. What is the most useful thing you have learned in this course?

- **i.** Structured, systematic approach to evaluation and management
- **ii.** Always remember ABC
- **iii.** Caution for C-Spine
- **iv.** Importance of secondary survey
- **v.** Assess and manage at the same time – As you find
- **vi.** Triaging and trauma team importance
- **vii.** Strict ATLS protocol follow up
- **viii.** Primary survey and a lot more…
- **ix.** Importance of fast approach
- **x.** Proper fast way of managing trauma victim
- **xi.** Going back to “Reassess” when patient deteriorates
- **xii.** Disaster management approach
- **xiii.** Trivial things may be crucial
- **xiv.** Value of team work

b. What TWO things do you plan to change in your trauma management as a result of this course?

- **i.** **1.** Cervical spine protection, 2. Team work
- **ii.** **1.** Reassessment when critical, 2. Logroll and back examination
- **iii.** **1.** Stepwise approach, 2. Use of available resources
- **iv.** **1.** Systematic evaluation, 2. Effective communication & teamwork
- **v.** **1.** Organize trauma team, 2. Prepare any time for trauma case

vi. **1.** Prepare triage system, 2. Equipment in RR and ER
vii. **1.** Effective primary survey, 2. Proper secondary survey
viii. **1.** Equipment availability 2. Train assistant personnel
ix. **1.** Pain management 2. Primary survey
x. **1.** To stereotype patients, 2. Give priority to primary survey
xi. **1.** C-Spine and logroll, patient 2. Primary survey even in awake
xii. **1.** Systematic approach, 2. Team work
xiii. **1.** Primary survey approach, 2.
xiv. **1.** Preparing team, 2. Course available

c. Thinking about the last trauma case that worried you would you change anything in your management? Please explain.

i. Missed hip dislocation in head injury patient ---------- Proper Survey
ii. Blunt head injury ---------- Put cervical collar for all
iii. C-Spine and back examination
iv. Distraction by hemorrhage ---------- Will follow ABC
v. Pain in ward patients on wound care ---------- Use Ketamine
vi. Further reading on trauma case
vii. Peculiarities of children and pregnancy trauma
viii. Always start with ABC
ix. Not diverted to site of injury but follow ABCD
x. C-Spine stabilization
xi. Create road traffic accident awareness
xii. Need to repeat ABCD when deterioration
xiii. C- Spine protection
xiv. Collar, logroll and functional equipment availability

3. Course Feedback Questions (14 respondents)

	Very Poor 1	**Poor 2**	**Average 3**	**Good 4**	**Very Good 5**
DAY 1					
			1	5	8
				2	12
				3	11
				2	12
			1	6	7
			1	4	9
			1	4	9
				5	9

				2	12

DAY 2					
				3	11
				3	11
				3	11
				3	11
				3	11
				5	9
				5	9
				4	10
		1	1	3	9
			1	4	9
				5	9

What was the best part of the course? - What would you change?

i. Short and brief lectures	- Time constraint
ii. Skill stations	- More time for skill practice
iii. Well prepared, timely arranged	- More time for skill and demos
iv. Case scenarios	- Team work & resource management
v. All	- Include special situations like cardiac & pulm
vi. Practical aspect	- Make myself ready
vii. ABCDE and primary survey	- Nothing
viii. Skill stations and workshops	- Approach to trauma victims
ix. Scenario practices	- Nothing, Thanks
x. Scenario practices	- Ward pain management & primary Survey
xi. Skill stations and workshops	- More time for them
xii. C-Spine immobilization demo	- C-Spine and logroll practice
xiii. Case scenarios	- More airway and circulation practicals
xiv. Skill stations and scenarios	- More time for scenarios, 1º & 2º survey demos

Course evaluation: As reflected in the above feedback, the course was well received and appreciated, particularly the skill stations, which were identified as an aspect that could be augmented in future courses.

External Faculty personal comments: It was a pleasure and honour to be asked to participate in this first independent PTC course in Gondar. On my previous trip to the department in November 2013, we had discussed the need for trauma training courses and debated which of various available courses would best fit as a postgraduate trauma

training course in Gondar. I was delighted to hear that PTC had been subsequently presented in both Addis and Gondar, was well received and a local faculty trained up, particularly as this course has become widely adopted by many member COSECSA countries.

My participation in this course was in keeping with a Memorandum of Agreement between Gondar University Hospital, Department of Surgery and the Branch for International Surgery, Department of Surgery, University of British Columbia, Canada. A major part of the MOA was the commitment to develop and support trauma training programs.

The faculty and Director are to be commended on an excellent first independent course and will no doubt continue to deliver excellent courses in the future. Involvement of external or international faculty in future courses is desirable to add depth and alternate perspectives but by no means would I consider it a requirement. First impressions of the course are of a well thought out distillation of ATLS principles tailored to the resource constrained clinical and teaching environment. Basic evaluation and resuscitative priorities are well emphasized.

One of the goals of the GUH-UBC memorandum was the development of trauma training programs for nurses with the objective of developing a more integrated team approach to trauma care. UBC and GUH trauma nurses evaluated the PTC content during this course with respect to delivering an integrated physician and nurse course in the future as advocated by other courses such as the CNIS's Trauma Team Training Course. At this point in time, it was felt that the knowledge and assessment skill gap between the two groups was too large to put on an integrated course. It was also felt that the nurses would be reluctant to fully participate in the presence of the doctors. For this reason, a separate course was provided for nurses based on PTC and TNCC content and modified to be more consistent with their skill level and specific nursing trauma assessment skill requirements. As the knowledge and assessment skill gap narrows, integrated PTC courses may be of value as a step to team building. Ms. Taulu's report on the nursing course is appended to this report.

While the overall course content and structure were considered excellent, some minor comments on specific content in the 2015 online versions are offered:

1. The demonstrated method for c-spine stabilization (Slides 43 & 245) does not adequately stabilized the neck in relation to the torso. One or both hands must be locked on to the shoulder to ensure chest and neck move as one. Those rolling patient should have hands crossed and on torso, not arms.

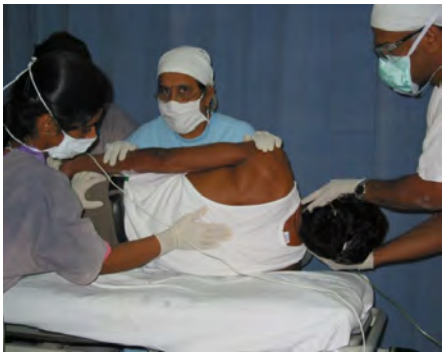

Fig 1. Incorrect method of stabilising neck during log roll (Slides 43 & 245).

Fig 2. Dr. Ibrahim demonstrating correct method of c-spine stabilization

2. Airway lecture and skill station under-emphasise the utility of cricothyroidotomy as a useful technique to emergently rescue a lost airway. The technique is not discussed as part of the skill station even though it remains a central skill requirement in the ATLS course and rightly so. When questioned, very few of the trainees would be willing to attempt the procedure even in the situation of a lost airway and patient in extremis. A mannequin for teaching cricothyroidotomy is readily available and inexpensive.

3. Circulation and resuscitation lecture follows standard ATLS tenants and introduces some of the aspects of damage control or hemostatic resuscitation. Slide 80 suggest up to 4L of saline could be given before commencing blood product usage – this is counter to most trauma resuscitative practices that recommending earlier and aggressive use of blood products if available.

4. Abdominal trauma lecture covers appropriate physical examination of the potentially injured abdomen though does not stress the relative insensitivity of PE in detecting significant injury particularly hemoperitoneum. Although FAST and DPL are listed as investigations at the end of the lecture, the importance of these studies in detecting hidden bleeding in a shocked or multiply injured patient is not well emphasized.

5. Similar courses (ATLS, TTTC, etc.) include assessment of performance in the scenarios as part of the overall student evaluation and I was curious why that was not the case for PTC.

In summary, it was a great pleasure and honour to have participated in this PTC course which is well thought out and credibly delivered by the GUH faculty. I look forward to future ones. I commend Dr. Mensur Osman and his colleagues for a job well done and for their ongoing commitment to improving trauma care at GUH.