Report from stay of Dr. Filip Zavada at Muhimbili National Hospital in Dar es Salaam/Tanzania

8 – 19 March 2014

The doctors:

John Rwegasha is a dedicated man with an attitude. He performs good upper endoscopy and diagnostic colonoscopy and uncomplicated colonic diagnostics and procedures. In the field of ERCP he is in his beginning and needs some further training until it will make sense to let him try on himself some uncomplicated cases. He still needs a lot to do with regard to achieve a good cannulating position and to get the scope under his control. I let him make a short papillotomy and he successfully cannulated once. Unfortunately all the cases were terrible hilar strictures, where stent placement was difficult. His theoretical background for ERCP however is good, so he is prepared.

Dr Komba is talented, but in the very beginning of both upper and colonic exams.

The surgeons are doing less the same spectrum of procedures as Dr Komba but I have not seen them so often to make a judgment.

The endoscopy reports produced are very basic and done in handwritten form. Since there is an enormous load of interesting cases, this should be switched to more structured reports for quality assessment and further research.

Fields of research are unlimited and and I tried to emphasize that every even basic research project will get a warm appreciation in Europe or US and everybody might draw attention by submitting her/his results to be presented on international meeting with a possibility to get funds raised for
travel costs.

There is a huge gap between the spotless cleanliness and efficacy of the hi-tech endoscopy unit and the underpowered and underequipped inpatient ward. If there is any chance to unite GE ward, outpatient service and endoscopy unit, the GE clinic could be better contained and all the routines and processes will be under better control and surveillance.
Strict guidelines for standard clinical scenarios should be prepared and followed. This applies especially to bleeders, infections and jaundiced patients.
Managing the GE unit is beyond the abilities of a single fully competent gastroenterologist who reports to the management and has an enormous bureaucratic workload. On the other hand, no European supervisor will be able to work out the relations towards multiple locally specific tasks. If somebody like this should be hired for a certain time period, his responsibilities should be mostly based on her/his expertise which is to a lesser extent under influence of local specificities.

The Nurses:
The endoscopy nurses are really enthusiastic and take care of the instruments. They clean them thoroughly and will do so as well with the disinfectors once being in use. There is a German medical technician, Berit Krohn, present at the unit by accident, so she helps them a lot to maintain hygiene standards and prepared a good instruction on radiation protection that is mounted on the wall of the ERCP room.
The nurses attitude towards patients is excellent in every aspect. They are used to take care. This applies also to those in the inpatient ward, which is otherwise very poorly equipped, with some exception of the Internal department ICU.
They need a careful and patient training in assisting during the procedures, especially in the more advanced ones like polypectomy, injection treatment, or any ERCP. Most of the procedures performed by myself or John were assisted by another physician, but it really needs a skilled woman‘s hand.
It is apparent that the accessories will be reused and seems logical to me. At the moment what was used is stored in a mess in a plastic bag or hangs everywhere in the examination room after being soaked in disinfectant.
They also need some introduction to sophisticated cleaning of accessory air and optics flushing jets that get clogged and when left dry, make the use of the scope impossible.
They are not familiar with the use of pressurized air pistol that helps a lot in these particular situations and are too afraid to clean the clogged flushing jet with some sharp object that is sometimes needed.

The Scopes:
At the moment there is only one GIFH180 in operation, used for interventions (mostly band ligations) and diagnostic EGD's are being performed with a colonoscope.
The two 180 colonoscopes are fine and do not show any major damage. The 150 needs repair or disposal.
The duodenosopes are in good shape as well.
The drying cabinet is not yet attached to air and serves as storage.
The electrosurgical ERBE is perfect and the endocut mode is used in most settings. The wiring connecting to patient electrode will have to be replaced as it is used frequently and will deteriorate. Some smaller rubber plate would be also beneficial.
The flushing pumps are not in use because the connecting tubes from the water container to the rotor and the scope were not provided. Therefore continuous flushing, that would help to clean the poorly prepared colons is not available because of small parts missing. I provided Beritt, the technician, with some instruction to call Olympus for shipment.
The SIEMENS X ray C arm is perfect. The local technician is able to operate it pretty well.
There is no recording device such as Medicapture or even a SD card that can be plugged into the Exera II processor (no longer available, since the evolution of Exera III). Some PC card able to connect and convert the S VHS output into digital will come cheaper than the Medicapture. Everybody has a state of the art notebook.
The STORZ tower probably should not attempt any resuscitation.
The STORZ anoscopes for hemmorhoidal ligation are fine.
At this moment I do not see any use for EUS according to the skills of the doctor's staff.
The SIEMENS ultrasound does not perform well, but might be sacrificed for training young doctors in identifying basic structures.
The patients referred for endoscopy should bring their CT scans burned to CD and there should be a DICOM imager which is available for download for free.
ETD disinfectors were connected to a purified water supply during my visit, but are not in service yet. An Olympus technician is needed to start up and give training for use.

The accessories:
The unused accessories are stored in order, with the intention to identify them on the rack. Sometimes they are misplaced or the boxes are empty.

If anything will be ordered to buy via the hospital bureaucracy, it will take weeks to get it, unless the patient will pay in advance for himself.
Some frequently used things are out of stock (esophageal stents of the usual length of 10-12 cm for example).
The ligators used for variceal bleed are among the most expensive ones. Some Chinese copy of Cook six shooter is available for a fraction of this price and works as well according to my domestic experience. Seven bands are rarely shot even in these local extremely advanced varices.
Whether ligation should be replaced by sclerotherapy is another issue, but since many patients who bleed have severe ascites this practice might raise the number of infectious complications.
The nurses should be instructed thoroughly on principles of cleaning and storing accessories intended for reuse. I discouraged all from reusing the injectors and it seems to be taken with respect.
The choice of stents for bilary interventions is too large. I would recommend only 7 and 10 Fr for better understanding. There might be use for nasobilary tubes in certain cases.
Nutritional devices like PEGs and nasojejunal tubes, as mentioned in other report, possess a particular problem since there are no formulas to be delivered via these small bore devices. The issue should be consulted with some dietitian from abroad, to create some cheap alternative recipe for local use.
The preparation for colonoscopy is poor because the PEG solution is not registered in Tanzania. This makes colonoscopy very limited, and use of advanced imaging such as NBI impossible. The bowel prep is a key issue in the whole colonoscopy problems area. Without it, there will be no move forward. Today the standard is castor oil and bisacodyl and some enema prior to examination. The results are therefore bad.
Buscopan is not a standard used for ERCP and is not in stock.
Chromoendoscopy was unheard of so we made some introduction and demonstration. Spray catether would be fine since iodine is available just as methylene blue.
The urease H pylori test is not available, patients are examined for H. pylori IgG and stool antigen which is more expensive and the results tend to get lost.

The teaching:
The hospital is overflowing with western aid workers, volunteering doctors, trainers, trainers of the trainers, public health experts and nursing teachers from the whole world. Their activities do not extend the ward they are attached to.
There is absolutely no coordination in this provided by MUHAS, not mentioning the absence of any simple board, advertising these activities.

My audience was then the GE fellows and medicine interns from the Internal medicine department and some young doctors from the Ocean Road Hospital.
Most of the student seem to have good access to internet with mobile plug-in's in their tablets or laptops and therefore can obtain a lot of material from the virtual world. I introduced them to Medscape and some other freely accessible sites of medical information, such as ESGE, AGA the Dave project. In contrary, to get an access to a slow internet MUHAS network, you need about nine different permits.
Some of the students really performed a good theoretical background and might contribute to a real competitive environment in the GE center in the future. Their written English is very good; the women are bit shy to communicate in English.
I served as an external examinator in evaluating two GE fellows' written exams. The questions were focused on IBD, colonic cancer and hepatitis B. One candidate performed very well and deserves a cum laude, the other one was less well prepared. The test was case based and reasonable.

Procedures performed:
ERCPs in hilar tumors with papilotomy and stenting
Needle knife papillotomy
Keyhole biopsy with a needle knife of a suspected GIST
Simple mucosal resection in the colon with submucosal injection and observing the lifting sign
Terminal ileum intubation during colonoscopy
Chromoendoscopy with iodine staining in the esophagus

Piecemeal polypectomy of a transverse colon polyp with a cancer appearance (referral from Aga Khan)
Difficult gastroscopy in infiltrating cancer/lymphoma of the cardia and stomach body with GE junction stricture
Polypectomy for beginners
Sigmoideoscopy in a young female patient with presumptive diagnosis of severe fistulizing Crohn's disease with an enetrourinary fistula (after I left it was confirmed as rectal cancer, advanced with possible liver mmets on CT). Case will be presented during ceremony.

Presentation given:
As in previously announced schedule

The Opening ceremony:
Is being prepared with great efforts. Five committees were established to tune to program to perfection. The biggest issue is the visit of The President and his safety. I was not much involved in this agenda, but tried to give John and his staff some ideas about how their scientific presentation should look like, I am aware that this will be predominantly a political and social event, but the presentation of the procedures should impress the audience too. They are planning to show some pre-recorded cases but have no devices for video capture and probably are not much experienced with video editing. I gave them my best advice knowing the limits of their efforts.
We made a pre-ceremonial trip with John to a historical site of Bagamoyo, an old port and mission that encountered both missionaries and slave trade and is a continental small version of what Zanzibar looks alike. It is accessible by road from Dar, about a 90 minute journey during which the colorful life of African street could be seen. The city itself has a beautiful historical museum, churches and some examples of original German colonial architecture and ancient Arab settlement. Since there were some reports on violence reported from Zanzibar, this really might be a very interesting place to visit as social event for the ceremony attendees. We enjoyed it with John very much.
Even a native Tanzanian John was ripped off on my entrance fees by an employee of the local tourist agency who overpriced it tenfold. We bargained it to half, but still paid fivefold the official tourist price, which, of course is not posted anywhere.

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