The Management of Surgical Emergencies

In Association with ASGBI

Lusaka, Zambia, 19th – 21st October 2011

University Teaching Hospital, Lusaka

Shekhar Biyani

Acknowledgements

Mr Bhatt and I are thankful to Mr Rob Lane MS FRCS Eng FRCS Ed FACS FWACS (Hon), Convener & Programme Director for International Affairs at the ASGBI for giving us this opportunity and facilitating our visit. His contribution, hard work, leadership and imagination are very great indeed. The joy and enthusiasm he has for training and teaching in sub-Saharan Africa was contagious and motivational for me.

We would like to express our sincere appreciation to Dr Robert Zulu and his team for supporting teaching sessions. Thank you to everyone for your hospitality and patience. I would like to acknowledge Prof Labib's pre-course guidance and a special thanks to Dr Nenad. We also wish to acknowledge the particular assistance and gracious hospitality we received from Dr Nenad.

I would like to acknowledge Karen Kenyon, Territory Manager, Yorkshire, Coloplast for providing manikins for the workshop.

We are indebted to Mr Ru MacDonagh Chairman, UROLINK for his encouragement and guidance.

Finally, The UROLINK team is also grateful to other faculty members for their fantastic support, ideas and encouragement throughout this trip.

Funding

UROLINK

Background

Zambia is classified as a low-income country and has a population of 11.6 million. The public sector is the largest provider of health care in Zambia. Interestingly, Zambia is also one of the most urbanized countries in sub-Saharan Africa, with approximately 38% of the population living in urban areas. The admitted human immunodeficiency virus/acquired immunodeficiency syndrome (HIV/AIDS) rate in Zambia is just under 10%[1] but it is generally agreed that it is in fact much higher than this and is increasing, in some part because of the migration of workers into the newly re-opened copper mines from Namibia and Mozambique.

Healthcare in Africa is faced with many challenges. In addition to the well-known problems of HIV/AIDS, malaria, and tuberculosis (TB), Africa has a critical shortage of surgeons, particularly in rural areas. Sub-Saharan Africa has the highest concentration of surgical disease burden[2] but the lowest concentration of surgical and anaesthesia providers—with only 1 surgeon per 400,000 people in East Africa.[3,4] The last decade has seen the emergence of numerous "neglected tropical disease" (NTD) initiatives in global public health and NTDs account for 1.3% of the global burden of disease and 20 million disability-adjusted life years (DALYs) globally, mainly in Africa.[5] Even with limited data, conservative estimates suggest that surgical conditions account for 11% of the total global burden of disease and 25 million DALYs in Africa, the region with the highest concentration of surgical DALYs (38/1,000 population).[2] It is therefore evident that training surgeons is essential for building the surgical workforce and ultimately improving surgical care across the continent.

I met Mr Lane during my first visit to Hawassa, Ethiopia in March 2010. Mr Lane has developed and run a number of surgical training courses for postgraduates and Clinical/Health officers throughout Africa in the last 10 years. Mr Lane and his team delivered a 5-day course on surgical emergencies in Hawassa; however, urology was not part of this course. During our return flight I mentioned that medical officers in the African subcontinent do see a good number of urinary retention and pelvic trauma cases. I therefore felt that they should be able to do a safe catheterisation and should be taught this technique. He emailed me in June 2010 with an idea of designing a 5-day course on

Emergency Surgery for sub-Saharan Africa, which will have at its core the practical applications of what is taught. I was asked to take the lead in urology. I informed Mr Ru MacDonagh, Chairman, UROLINK and on his advice contacted Mr Jaimin Bhatt. I am thankful to Ru for suggesting his name as Jaimin contributed immeasurably. Mr Lane contacted specialists from other surgical specialities (orthopaedics, O & G, general surgery and critical care) and the first meeting was organised on 15th October 2010 at the Royal College of Surgeons of England for the pilot course on the "The Management of Surgical Emergencies". A short presentation was done by each speciality and a further discussion took place on course content, number of candidates, method of delivery and assessment. In the next 5 months lots of email exchanges were done between all faculty members. During my second visit to Hawassa in March 2011, we (Mr Joby Taylor, Mr Bhatt and I) joined the ASGBI team and delivered a 4-hour session on urological emergencies - we received very good feedback.

A second meeting was organised on 6th April 2011 at the College to finalise this pilot course. Mr Lane informed us that the first course will be at Lusaka, Zambia and will be from 19th October to 21st October 2011.

The University Teaching Hospital (UTH) is the biggest hospital in Zambia. It is located in the capital city, Lusaka, approximately 4km east of the city centre and is the principle medical training institution in the country for medical students, interns, and postgraduate doctors. It also trains nurses through the Nursing School located within the hospital grounds as well as Clinical Officers through their college located at Chainama Hills College Hospital. The UTH has approximately 1655 beds and 250 baby cots. It provides a full range of primary, secondary and tertiary health and medical services on both an inpatient and outpatient basis.

Figure 1: The University Teaching Hospital, Lusaka

Jaimin and I started our preparation for the urology session. We selected our topics. I managed to get urethral and suprapubic catheterisation manikins on loan. I also obtained a short video on urethral catheterisation technique. Mr Bhatt resourced catheters for candidates to practice with. Our aim was to deliver our part of the course in the most practical way.

Course objectives – Appendix 2

Itinerary

On our arrival on 15th October 2011, Dr Robert Zulu and his team greeted us. We were transferred to the Taj Pamodzi hotel in two vans. Everyone wanted to relax a bit after the overnight flight. We went to the UTH to meet the Head of Surgery Dr Muntali. The purpose of this meeting was to review arrangements for the course. We were given a list of delegates. From the list it appeared that the majority of candidates were doing post-graduation in general surgery. In addition, a few from orthopaedics and O & G were also

attending. We agreed to have 1 or 2 observers during the teaching session. I met Prof. Mohd Labib, Head of Urology and discussed our teaching and training sessions. Unfortunately, he was travelling to the USA for 4 weeks. However, he introduced me to Dr Nenad Spasojevic, Urologist, and assured me that Mr Bhatt and I will get full

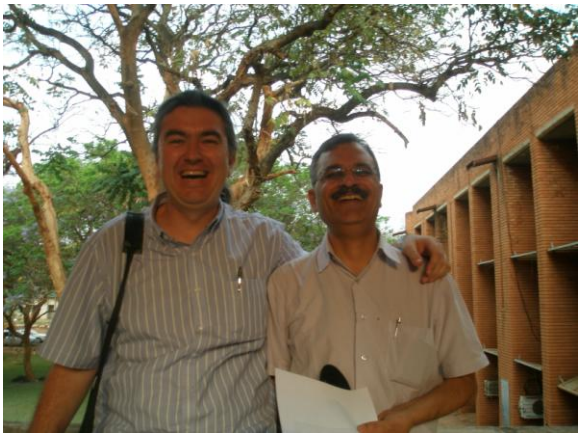

Figure 2 & 3: Prof Labib and Dr Nenad with Shekhar Biyani

assistance from Dr Nenad. In the evening Mr Lane organised a meeting of faculty members at the hotel. We went through the programme, sessions (table 1), assessment tools and feedback forms. On Sunday, I joined Mr Lane, Mr Gartell and Mr Lock for the dissection session. We dissected a pig to assess our models for the course. I dissected out a bladder for the urology sessions. In the afternoon, we joined other team members for lunch at a safari park. Mr Jaimin Bhatt also joined the team as he flew via Kenya. At lunch Prof Labib and his wife joined us.




Figure 4 to 7: Faculty members at the safari park

17th October 2011

We left the hotel around 07:30 with Dr Nenad, while the rest travelled with Dr Zulu. Mr Dreyer and his team inaugurated this pilot course with a 2-day teaching on critical care. After the introduction and registration (name, surgical speciality, email address), 24 candidates were divided into 3 groups (Red, Blue and Green). Mr Bhatt and I took this opportunity to teach urology to residents. In the evening a feedback session was organised by Mr Lane. Mr Dreyer and his team shared their experience with other team members.

18th October 2011

Mr Dreyer continued the critical care session. I went to the operating theatre for urology teaching. A detail description of our urological activities outside this course is presented in

Mr Bhatt's report. It was interesting to see a finger recognition entry system at the entrance of theatre. All candidates were assessed on the critical care topic by Mr Dreyer's team.

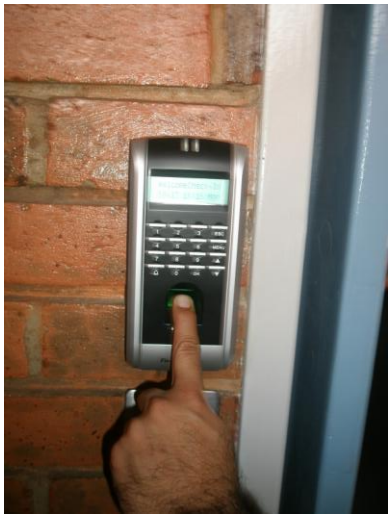
Figure 8: Finger recognition device.

19th October 2011

There were sessions conducted in orthopaedics, general surgery, urology and O & G. We were given 4 hours for urology session. Jaimin and I divided 8 candidates in to 2 groups. We covered the following topics:

- Urethral catheterisation
- Suprapubic catheterisation
- Renal colic and IVU
- Priapism
- Acute scrotum
- Bladder injury

After short presentations delegates were asked to perform practical skills like catheterisation (urethral and suprapubic) on manikins; scrotal exploration and bladder repair on a pig's bladder and scrota. After 2 hours, the groups were swapped. We over ran our session by nearly an hour. This was due to multiple factors like breaks, a lack of abattoir

material and poor familiarity regarding local protocols. Urology nursing staff also joined our session as observers.

Figure 9 & 10: Mr Biyani and Mr Bhatt teaching urology topics

In the evening we were invited by the First Lady, Dr Christine M Kaseba-Sata, for a dinner. She did her O & G training in the UK and worked with Dr Shirin Irani (O & G Lead), one of our faculty members. Unfortunately that night Mr Naidu, from the orthopaedic team developed a severe allergic reaction to food and required adrenaline and steroid in the night. It was a scary and stressful situation.


Figure 10 & 11: Dinner with the First Lady Dr Kaseba-Sata. Mr Lane is thanking the First Lady and Ms Irani (old friend) sharing some happy memories.

20th October 2011

Mr Naidu felt better in the morning but was asked to rest. I therefore went to the orthopaedic session and helped Mr Nathdwarawala. It was an interesting experience for me and I managed to refresh my tendon repair technique. Mr Naidu arrived by lunchtime and I went down to prepare for urology teaching. We continued our session in a similar fashion like Wednesday. On Thursday our time management was better and we finished just in time. I think the previous days experience coupled with repetition (as we were teaching the same topics twice in a day) improved our performance. Dr Nenad joined Mr Bhatt on Wednesday and Thursday. Mr Bhatt had booked his return flight for Friday morning on the basis of the initial timetable. Dr Nenad offered to drop Mr Bhatt at the airport in the morning.

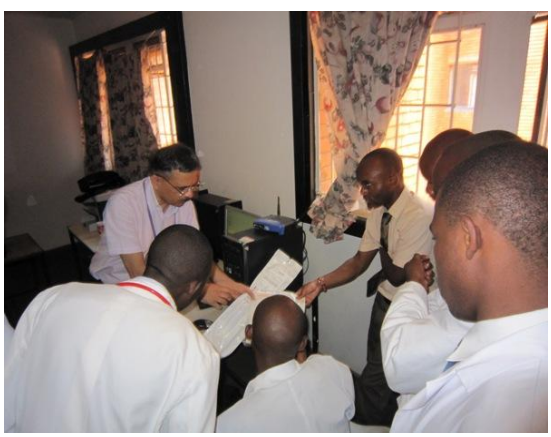


Figure 12 & 13: Urology teaching session

21st October 2011

Dr Nenad came to the hotel. Mr Bhatt and I travelled with him to the airport. We dropped Mr Bhatt and came to the UTH. He asked me to teach 5th year medical students in the morning. I gave 2 lectures ("Urogenital trauma" and "How to read a KUB"). Dr Nenad was present at the session. I found that students were quite up-to-date and were keen on discussion. Dr Nenad informed me in the evening that students liked both topics and feedback was very positive.

In the afternoon Dr Nenad helped me to run the urology session. Mr Bhatt and I are grateful to him. He agreed to assist on such short notice.




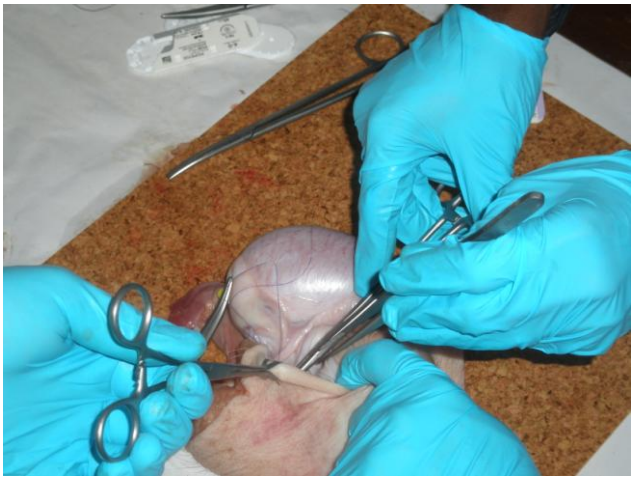

Figure 14 to 17: Urology teaching session

At 5.30 pm all delegates were asked to take an MCQ based test. There were 10 questions from general surgery; 10 from orthopaedics; 5 from O & G and 5 from urology. After the test candidates were given a certificate and a group photograph was taken.

Figure 18: All course participants with faculty members

We all arrived back at the hotel around 7 pm and thanked Mr Lane for organising such a wonderful course.

22nd October 2011

We all reached to the airport at 6 am and checked-in. At 7.30 am we were informed that the flight will be delayed due to some problem. Finally at 9.30 am the flight was cancelled and we were transferred back to the Intercontinental Hotel. Unfortunately, local BA staff could not give us any definitive answer about our departure. We were told that the aircraft needs a part and this can take 2 days. On Sunday we had another meeting with BA staff and passengers with connecting flights from London were booked on the Monday morning regular flight to London. I was given a seat on that flight but other members from the group were flown to London via Johannesburg late Monday evening. I reached home late Monday

night to resume work on Tuesday and my colleagues had a really tough time reaching London late Tuesday evening.

All 24 participants were qualified doctors and the majority were on an MMed programme, although it has to be said that most were year 1 or 2. There was extensive assessment and feedback and plan is to contact all participants in 6 months to ascertain how much of what they have learned has been put into practice. I believe Mr Lane with the local team can justifiably look back with pride at a highly successful course.
I consider there is a role for UROLINK to have a partnership with the ASGBI in supporting surgical training and improvement of surgical services and such a partnership can be mutually beneficial and may, in the long term, have a significant effect on surgery including urology in Africa.

What went well?

1. From informal discussion with candidates it appears that they all liked the urology session. I am hopeful that the feedback forms will confirm this.
2. Involvement of Dr Nenad as a local faculty member from the start generated "home" ownership.
3. Mr Lane's leadership was exceptional and cooperation between faculty members was marvellous.
4. Staying at one place improved bonding between members, allowed exchange of ideas and hassle free travel between hotel and hospital.
5. A multi-speciality approach helps to facilitate a better training programme.
6. Accommodation and food were perfect.
7. AV worked very well. Thanks to Prof Labib for giving us a projector.
8. Number of delegates in urology groups was just right (8 divided in to 2 groups). However, total number should be ~18.
9. Outstanding local support.

What could we have done better?

1. After discussion with many candidates I understand that renal colic is not a common problem in their setting. When asked about ureteric trauma, majority said that they

had encountered this in their practice. I therefore think in the urology session, renal colic should be replaced with management of ureteric injuries. This should include end-to-end anastomosis and re-implantation of ureter on an animal model.

2. Venue for the urology session was suboptimal. We should look for a better facility.
3. A pre-course manual would minimise presentation time and would allow more "hands on" time in sessions.
4. To acquire more abattoir material.
5. To standardise minimum skills required to enrol on the course.

Opportunities

1. The University Teaching Hospital is a big hospital with satisfactory infrastructure. There is an opportunity to develop a "hands on" course for the region. In the future doctors in training from neighbouring countries may participate.
2. To increase involvement of local faculty and indirectly the course may facilitate "Training the trainers".
3. Urology is a small surgical speciality. Sharing resources, venues and courses would improve urological care in this part of the world.

Threat

1. Financially it may be difficult to continue this on an annual basis unless some special funding is available.

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Appendix 1

FACULTY DETAILS: Lusaka

Mr Robert Lane	**Convenor**
Mr Paul Gartell	General Surgery
Mr Russell Lock	General Surgery
Mr Fanus Dreyer	Critical Care
Mr Jonathan Hannay	Critical Care
Dr. David Ball	Critical Care
Mr Shekhar Biyani	Urology
Mr Jaimin Bhatt	Urology
Mr Yogesh Nathdwarawala	Orthopaedic
Mr Naidu Maripuri	Orthopaedic
Miss Shirin Irani	O & G
Mr. Michael Wyldes	O & G
Sister Judy Mewburn	Theatre Sister

Appendix 2

MANAGEMENT OF SURGICAL EMERGENCIES

A course for Surgical Residents

To be hosted by

The Surgical Society of Zambia

17 – 21 OCTOBER 2011

at

LUSAKA UNIVERSITY TEACHING HOSPITAL

This is a new course designed by the Association of Surgeons of Great Britain and Ireland as part of their commitment to support COSECSA with their Educational and Training Programme.

Course objectives

To learn how to assess signs and symptoms of common surgical emergencies and how to initiate an immediate management plan based upon sound principles of clinical practice.

Course content

The course will begin promptly at 08:30 each morning. Monday and Tuesday will be devoted to the management of the critically ill surgical patient and will involve lectures, demonstrations, DVD's and practice of procedures, discussion of images and case studies, role play and, finally, critiquing each other's performance.

All participants will be together for these two days but will be split into 3 groups for rotation through some teaching stations with each group being allocated a mentor for this part of the course.

Wednesday, Thursday and Friday will be run in a different manner. The participants will be divided into three groups with equal numbers in each which will allow for more supervised tuition.

On Wednesday, one group will spend all day devoted to general surgical emergencies whilst another will spend all day devoted to orthopaedics and trauma. Finally the last group will be divided into two, with one half spending the morning devoted to urological emergencies and the other to obstetric emergencies, with each swopping over in the afternoon.

The groups will switch over on Thursday and Friday such that they will rotate through all the specialties during the three days. Mini lectures, DVD's, demonstrations, case scenario discussions and much "hands on" practical tuition will be the essence of these Specialty modules.

Assessment

All participants will undergo assessment throughout the course. On Tuesday afternoon there will be formal (summative) assessment of critical care knowledge through MCQs (multiple choice questions) and EMQs (extended matching questions). On Friday afternoon there will be formal assessment of knowledge of the surgical specialties (days 3-5) through MCQs.

During the critical care block, students will be assessed continuously on non-technical skills (e.g. communication skills, decision making, teamwork, leadership, enthusiasm and participation).

During the surgical, orthopaedic, urological and obstetric rotations participants will also be assessed on their technical skills.

Each participant will receive individual feedback on his/her strong and weak points.

A Certificate will be awarded to those who have satisfied the Specialty Leads with regard to their knowledge and competence. It is therefore important that each participant is punctual and attends ***every day*** of the course. The expectation is that participants who attend all the sessions and actively participate in the programme should learn enough to be in a strong position to pass the course.

Participants will be asked to complete an evaluation form at the end of the course.

RHS Lane, Convenor,

September 2011.

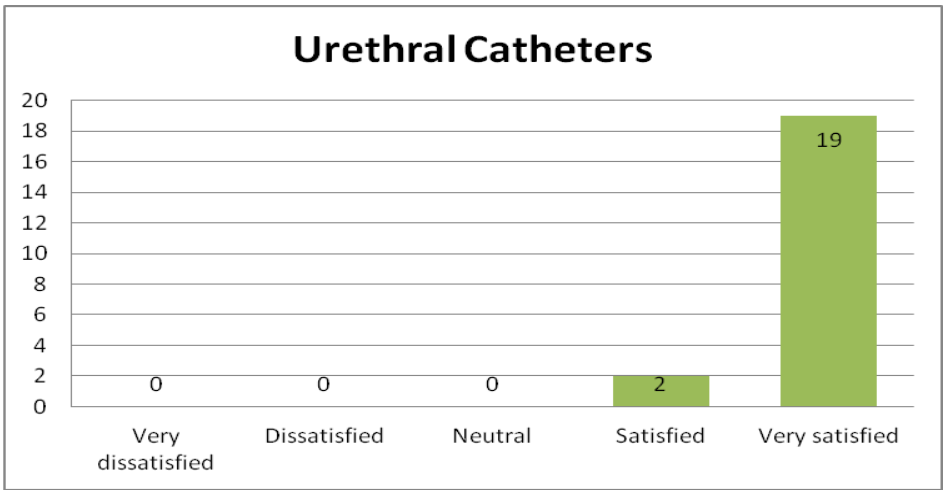
Appendix 3

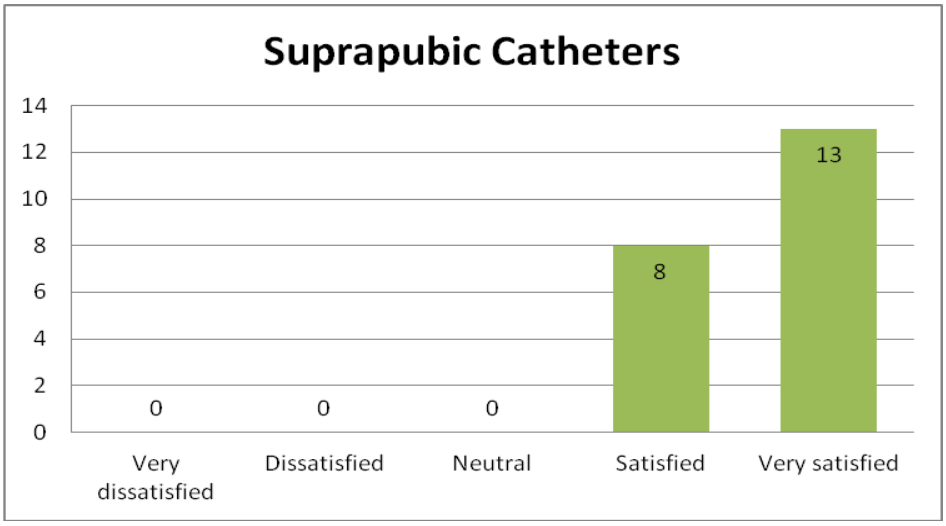
Programme for candidates

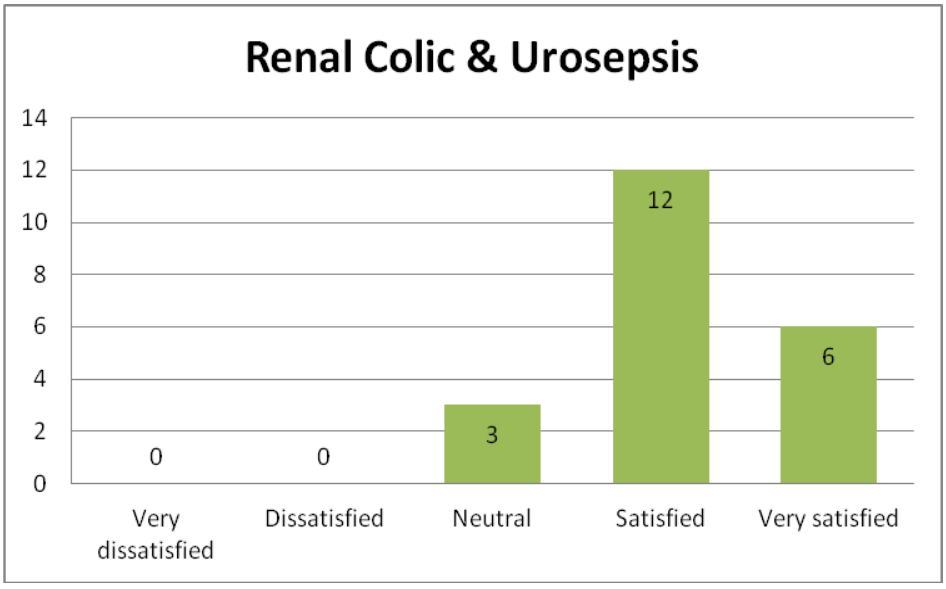
	No. of Delegates	AM	PM
Monday	24	Critical Care	Critical Care
Tuesday	24	Critical Care	Critical Care
Wednesday	8	General Surgery	General Surgery
	8	Orthopaedic	Orthopaedic
	8	Obstetrics & Gynaecology	**Urology**
Thursday	8	General Surgery	General Surgery
	8	Orthopaedic	Orthopaedic
	8	Obstetrics & Gynaecology	**Urology**
Friday	8	General Surgery	General Surgery
	8	Orthopaedic	Orthopaedic
	8	Obstetrics & Gynaecology	**Urology**
	24	**MCQ test**	

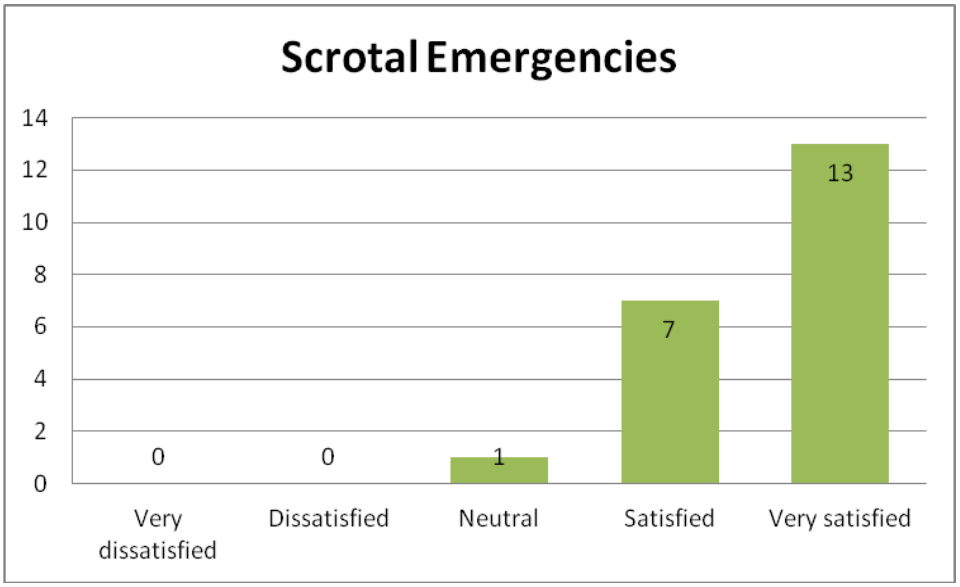
Appendix 4

Student Feedback - Urology








Scrotal Emergencies
14
12
10
8
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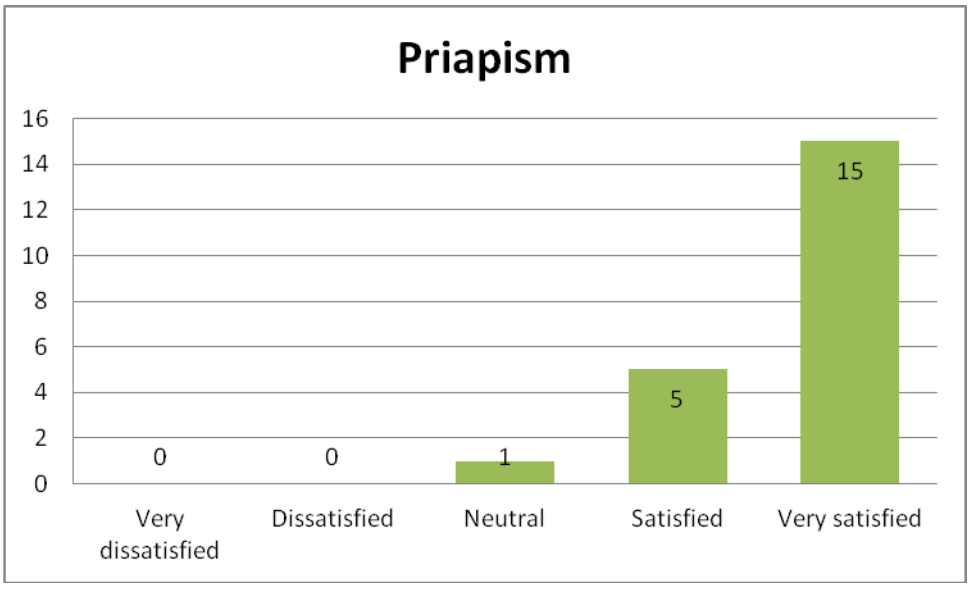
1
7
13
Very dissatisfied
Dissatisfied
Neutral
Satisfied
Very satisfied


Priapism
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Dissatisfied
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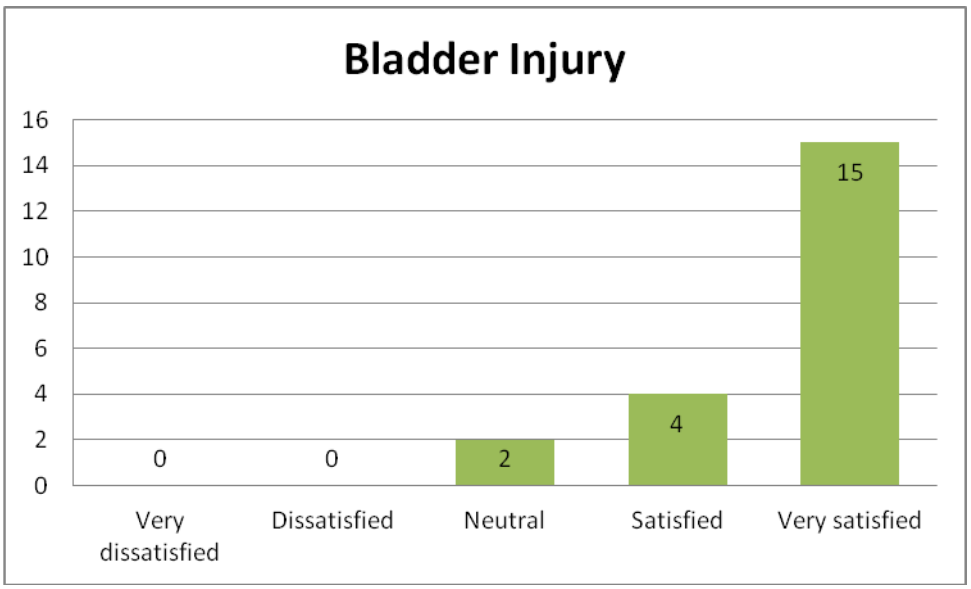
Satisfied
Very satisfied


Bladder Injury
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Very dissatisfied
Dissatisfied
Neutral
Satisfied
Very satisfied

What was very good?

Faculty were very clear and concise. Enjoyed the practical part: real feel for procedure.
1. More hands-on with practicals, not enough time to practice 2. The scenarios … topics interesting.
Yes it was very good.
Facilitation.
Priapism & bladder injury.
The scenarios & practical sessions.
Absolutely precise & practical sessions.
The sessions were very informative and specially enjoyed bladder injury and scrotal emergency.
The topics are well good.
Very interactive & practical.
Sessions were very practical.
Illustration of bladder repair and sprapubic catheterisation.
The first 3 tutorials (catheters & urosepsis).
Enjoyed principle in urethral catheterisation.
Good enthusiastic teaching with hands on.
Huge volume of information compressed well and adapted well to our group.
Urologist simplifies things and makes us group facts easily.
Demonstrations
The talk was very good.
New information was given that is very helpful.

What could be better?

More specimens so everyone has a go at it. Session on first 3 topics too long esp that it was more of a lecture.
More time to practice.
Yes if there could be several samples e.g. bladders and scrotums so that everyone can practiceat the same time.
Content on some topics was superficial.
More time.
Limitation with time.
Light in the room.
Full demonstration of the Winter's shunt in the management of priapism.
N/A.
More time for urology practical.
Last day training shouldn't be compressed. Extra provision for last day so as not to miss out on any practical exercise.
More time was needed.
More scenarios.
More time to practice scrotal emergencies would have been great.
More time: a whole day of urology, not an afternoon.

Other comments?

Practical session should be longer. Urological session requires all day not rushed due to lack of time.
Well structured course.
It's good. Am glad I cameand it gives me confidence to do urological emergencies.
Course is good, however, will need more time & practical sessions.
The course is very well structured and ideal for my practice.
Sincere thanks to all. Kindly make this annual for the next 3-5years.
This course has been very practicle.
Increase more of the topics. Thanks a lot.
The tutorials were very eye-opening and very inspiring.
Improve on practical time so that we could all have a go on it.
Huge field to cover in one afternoon.
Very good practical training and mentorship.
Consultant urologist is simply excellent.
Keep it up!!
The Indian consultant was very exciting and encouraging.
Enjoyed the course. Found it beneficial.

Appendix 5

Evaluation Report

Pilot Course on "The Management of Surgical Emergencies"

There were 24 participants who scored an average of 8.7 out of 10 with a range from 7 to 10.

They all found the course useful and the following aspects were reported as being ***most*** useful – orthopaedics/trauma (10), critical care (8), general surgery (8), all (5), practical aspects (5), urology (5), obstetrics (2).

Five participants reported no least helpful aspects but those that were reported included vascular skills (3), orthopaedic plating (2), ICU (1), monitoring in critical care (1), CVS resuscitation (1), "ECG's could have been better handled" (1), urology "too theoretical" (2), urology (1), "leave time for more urological emergencies" (1), O&G (1) and finally "parts where we would sit and listen for more than two hours – mind wandered" (1).

Suggestions for improving the course included:-

More practical sessions (3)

More time for O/G (2)

Shorten the final day because of MCQ's (2)

Pre course material sent to participants (2)

Add a basic surgical skills element (2)

The following were mentioned once each:-

Intubation for neonates

ECG interpretation

More on chest trauma

Allocate more time to specific specialty

Theory given before practical sessions

More simulation on critical care scenarios

More critical care in general

Ventilation (mechanical)

Bowel resection

Nerve repair

General Paediatric emergencies

More pigs.

Other comments were highly complementary and included the following:-

A very well organised course, excellent mentorship, practical sessions very good, learned beyond my expectation, should like to have this course every year, more time to be spent on communication skills, do the BSS first and tailor to specific grades of trainees.