Bangladesh

3.12- 10.12 2016

Introduction

BFIRST made their first visit to Dhaka, in Bangladesh, in late 2015. The report from that visit described the basic conditions in Bangladesh, the state of play regarding medical care and treatment, and the basic outline of plastic surgery services. There has been little change in the last 12 months in these areas, and the background briefing material present in the report on the 2015 trip should be read in conjunction with this one. It is worth noting, however, that the security situation in Bangladesh has changed since the last visit. In July 2016, gunmen linked to ISIS attacked a bakery in an upmarket area of Dhaka, and 20 hostages, including 18 foreigners, were killed. As a result of this attack, security concerns have been raised over travel to Dhaka, and some medical charities are at present not visiting the country.

BFIRST visit 3.12- 10.12

Andy Williams and Barbara Jemec visited Dhaka for a week from the 3rd to the 10th of December 2016. Once again, our visit was facilitated by Asst Prof Tanveer Ahmed, who helped with the necessary letters of introduction. Andy organized a visa through the Bangladesh High Commission in London, and Barbara was granted a visa on arrival ($50) with the aforementioned paperwork, both of which were relatively seamless. Staff at the hospital helped out with transport to and from the hospital each day, and for various social activities after work.

Each day commenced with a ward round of the National Institute of Burn and Plastic Surgery (NIBP) building. This is a 100- bed facility within Dhaka Medical College Hospital, and the focus point for this and the previous visit. On Day 1 of our visit, the unit as usual was running over capacity, with 527 inpatients. Medical care continues to be basic, due to a lack of equipment and space, plus shortages in trained nursing staff and therapists.

Our visit overlapped with that of a charity team from Singapore, plus the annual Hand Conference : the 11th National Conference on Hand Surgery BDSSHCON 2016 and as a

result there was less opportunity to present in the morning teaching sessions. However, the following lectures were delivered:

Sunday we went to the conference and met Prof Sabapathy
Monday Andy and How to use the electric Dermatome BFIRST donated
Tuesday Andy and How to publish
Wednesday - we went to the NITOR (National Institute of Traumatology and Orthopedic Rehabilitation)
Thursday Barbara- tendon transfers in theatres as we listened to the Singaporean team

The lecture programme presented in 2015 was enthusiastically received, but feedback from this visit indicated a desire from the trainees for more hands-on training and a case based discussion rather than theory. As a result, Barbara constructed a tendon-transfer model and used this as a teaching tool during a complex, post-electrical burn tendon transfer case. The model, based around an upper limb skeleton using replica bones, was donated to the Institute. (For future reference, Barbara and Andy recommend checked luggage for such models, following an unfortunate incident at the security screen check-point in Dhaka!)

BFIRST kindly donated a battery-operated dermatome (D42 model, Humeca), the first such instrument in NIBP, along with 100 dermatome blades. Andy then assisted the trainees to harvest skin using the new dermatome on 3 burns cases. After a thorough demonstration and hands on teaching session which included the nurses in theatres.

One morning was also spent at NITOR, the National Institute of Traumatology and Orthopedic Rehabilitation, on the invitation of Prof Md. Abdul Mollah, the President of the Bangladesh Orthopedic Society. NITOR was the previous “home” of plastic surgery services in Bangladesh, and the hospital is currently being expanded. There are plans to open a 50-bed unit for plastic surgery cases in the new hospital. At present, some plastic surgery training is based at NIBP, but there is widespread awareness amongst senior plastic surgeons that training needs to be diversified, both geographically , and in terms of sub-specialty training. The plans at NITOR will allow trainees to get more experience in lower-limb reconstruction, for example, and also kickstart the process of establishing plastic surgery residencies in other hospitals, both in Dhaka, and other cities in Bangladesh.

Whilst at NITOR, Barbara presented a lecture on tendon repairs: the theory strands vs glide and strength, and pulley venting and Andy spoke on Hand burns and the acute care of burns

A visit was also made to the building site of the new NIBP, planned to open in 2018. The current Prime Minister of Bangladesh, Sheikh Hasina, has taken a personal interest in the management of burn injuries in the country, and has backed the new unit, due to open in 2018. The new building will have 500 beds, including a 250-bed burns unit, possibly the largest worldwide. 12 theatres are planned (6 for burns and 6 for plastic surgery), of

which 4 will run 24 –hourly. Facilities planned include a skin bank, research and pathology labs, and hyperbaric chambers. The plans and new building site look very impressive. However, there is a realization amongst senior plastic surgeons at NIBP that a huge investment will be needed to provide equipment and adequate staff for the new unit.

Current challenges in plastic surgery services, and suggestions for improvement

The report on the 2015 visit made the following recommendations:

(i) **Define the size of the problem**- via accurate record-keeping, and collection of data for audit and research purposes. The suggestion was that the current generation of trainees be tasked with responsibility for this.
Outcome- this has been partially achieved. We met with a number of trainees during this visit who were enthusiastic about research, and aware that the demographics of burn injuries in Bangladesh allow unique opportunities for audit. A large demographic study of burn injuries in children was presented at the hand conference by Masuma Sarker, a local PS trainee. There are also plans to adhere to WHO standards of record keeping when the new Institute opens.

(ii) **Prevention strategies**- via educational programmes and publicity to highlight the dangers of overhead power lines, plus household sources of burns.
Outcome- this has not been achieved as yet. There is a high level of awareness amongst the plastic surgery fraternity in the country about the importance of prevention, but getting the message out to the community has not happened.

(iii) **Plan for future plastic surgery needs.**
Outcome- A huge amount of progress has been made in this area. As well as progress on the new building, there are plans to expand the plastic surgery residency programme to other hospitals in Dhaka and further afield. The problems common to all health services (funding, staffing, etc) have been encountered during planning for the new hospital, but these challenges are being actively addressed. There is a conscious awareness that the new Institute needs to be more than just a large building, but needs proper staff, equipment and financial support.

(iv) **Ongoing continuing care**- via support from external stakeholders.
Outcome- this is in progress. We were warmly received during this visit, and there is now a perception, we think, that BFIRST is "in it for the long run", and just as importantly, will work with local stakeholders to support their development, rather than imposing an external agenda. The BFIRST suggestion of making a programme for NIBP with the other stakeholder NGOs was warmly welcomed and have asked us for guidance on infection control and publications, fat

transfer in burns, as well as rhinoplasty surgery. We have stressed the latter can only be provided in conjunction with cleft surgery.

(v) **Immediate improvements**- via teaching in fasciotomies, contracture releases, adrenaline for donor sites, splinting and hand exercises.
Outcome- these suggestions have been partially successful. Certainly there was more awareness of the importance of fasciotomies and contracture release amongst the trainees following our teaching programme on the 2015 trip. Local anaesthetic with adrenaline was being routinely used for donor site harvest. However, the therapists were still providing an inadequate splinting service, and quite often splints were being applied poorly (eg in a paddle rather than POSI position). There was also no material available for pressure garments, or silicone sheeting for topical use on hypertrophic scars.

Following the 2016 visit, we make the following recommendations:

(i) **Liaison with other external stakeholders.** During 2016, Andy tried (unsuccessfully) to organize a meeting between members of BFIRST, Interplast Australia, Interburn, Operation Smile, Smile Train and various other charities visiting Bangladesh. Our current visit highlighted the importance of having, at the very least, a shared calendar so that various teams are not overlapping their visits and stretching local resources (eg the operating theatres).
Action- Andy will work on a website that will allow these external stakeholders to communicate with the team in Dhaka to plan visits, create teaching and training wish lists, assist with publication of papers, and create an equipment wishlist.

(ii) **Provide therapy support.** On both trips, it was apparent that postoperative care, for both burn and hand surgery cases, was lacking. In 2016 we saw more evidence of splints being applied and splinting materials being available, but these were often being done badly, and the importance of postop exercises and therapy was being overlooked. The handbook on pressure dressings which was translated into Bangladeshi by Dahlia Masud was received by the therapists, but lat year's teachings seem to have been forgotten.
Action- Barbara will look at arranging to bring a therapist (Zoe Clift) to Dhaka during the next BFIRST trip, in order to strengthen teaching and training activities in this area. It might also be possible, using the website mentioned above, to establish a clinical forum where cases can be discussed and therapy recommendations made.

(iii) **Specific training/development needs expressed by local surgeons:** rhinoplasty, secondary breast reconstruction after burns, lipomodelling, skinbank es-

tablishment, nutritional support for burns, prevention of infection in burns, infection control, therapy, journals (JPRAS and JHSE), teaching materials:digital media/simulations