BASK and ISKSAA travelling fellowship 2016
Fellowship report

Mr. Simon Middleton

Location: NEW DELHI, India
Dates: 15th November – 1st December 2016
Host: Dr. Pushpinder Bajaj, Prof Maini

The BASK 2013 conference in Leeds hosted a small delegation of Indian knee surgeons who talked about their experience with total knee arthroplasty in extreme deformity and in obese patients. Whilst then as an ST5 trainee neither of these directly appealed to me it did highlight to me that there were options to experience these extremes of pathology. So when the advert for the BASK 2016 travelling fellow award to New Delhi was published in September 2106 I jumped at the opportunity. The fellowship was to include admission to the ISKSAA congress and a series of tailored visits to units in and around Delhi.3 weeks later I received the news that my application had been accepted. Luckily the fellowship was well supported by my department and colleagues who granted the leave and soaked up the on call swaps respectively.

In the few days prior to leaving for New Delhi the press was full of warnings about the air quality in Delhi following crop burning in the north and fireworks used to celebrate Diwali. This is of course on the background of one of the most polluted cities on earth. Second to that in a surprise move the government, in one swoop, demonetarised 500 and 1000 Rupee notes in an attempt to stop black market trading. 85% percent of the notes in circulation were immediately worthless, not a problems in itself for the traveller, but a huge problem for the vast majority of Indians who rely on cash. This led immediately to a rush on ATM's and made trying to get money almost impossible with tight limits applied. The first problem this produced for me was queuing for a few hours at the airport to try to change a limited amount of Sterling and then only receiving large denomination notes that the taxis wouldn't accept resulting in me being 'fleeced' for a transfer to the hotel. The preceding's nights flight with change in time and already one third of my cash gone all made for an interesting first day in India. That said I made contact with one of the local surgeons and president of the ISKSAA and arranged the first few days of the visit.

The visits started at the Sports Injuries Centre (SIC) Safdarjung Hospital. This is a State financed centre that was conceived by and is directed by Dr Deepak Chaudhary. I went straight up to the OT and met the 4 consultants and the assistant Professor. They were already into a days work. Their timetable is easily followed, 3 days in theatre and 3 days in outpatients a week, working in two teams with theatres utilized 6 days a week. Their theatre lists are spread over 3 theatres with multiple surgeons assisting and operating at once in well equipped theatres. The patients can just turn up to the outpatients clinic, are seen, investigated and listed all in the initial visit and have a wait of about 2 months to get to theatre. The centre is very well

organized with radiology including an MRI and CT scanner, a very well equipped physio gym and rehab suite and ward facilities allowing the centre to remain self contained. They provide training for surgical residents and therefore the theatres were very well staffed with doctors. On the first day I started to understand the systems of health care that exist as well as to try to understand their training program and levels of experience. Postgraduatetraining can be completed in a few years with only 3 years of orthopaedics needed prior to being free to practice independently. Most however go on to complete further senior resident and fellowships in specific fields. The choice then comes down to trying to set up a private practice on your own and renting out operating space, to find a job in a private hospital working as part of a consortium or to work in the state sector. State care covers most costs incurred but not the cost of the implants. Military and government employees are able to recover the costs of their implants but this still leaves up to a third of the population unable to access health care. The patients visiting the SIC are generally fit and active sports men and women as well as military and para-military forces but they also do primary hip and knee arthroplasty and a few revisions. By far their biggest workload is ACL and other knee ligament reconstruction surgery. They utilise double bundle reconstruction in those who can afford the increased number of implants and in the high level athletes performed with mainly autologous hamstrings. They perform up to 1800 ACLR annually and take around 30 minutes per reconstruction. Usually they have a surgeon and 2 assistants whilst another or the implant rep prepares the graft according to the requirements. I saw 8 ACLR's, a mixture of single and double bundle,during the first day as well as a PCL reconstruction utilizing both posteromedial and posterolateral portals with no x ray. Patientsgenerally have a spinal anaesthetic for ligament reconstruction or epidural for arthroplasty and otherwise are awake, albeit with their eyes covered up. My 2 days at the SIC were a great start to my trip and whetted my apatite for further opportunities to discover more about the system. During those 2 days the television in the surgeons coffee room was constantly tuned into the first test match of England vs India in Hyderabad, England performed pretty badly, making my life slightly more uncomfortable.

After this exposure to the medical system I moved further north in Delhi to the conference, a challenge made more difficult by the enduring lack of cash but rescued by Uber. Delhi itself was larger, nosier, busier and more chaotic that I could have possible imagined. I have travelled to some interesting places previously with the Royal Navy and in my youth but never to a megacity such as Delhi. With up to an estimated 30 million residents its scale is unimaginable.

The ISKSAA (International society for Knowledge for Surgeons on Arthroscopy and Arthroplasty) congress2016 was a three-day international conference with a preceding extra day of cadaveric workshops from labs around the city. I was able to attend the advanced knee ligament reconstruction course. The conference itself was an enormous affair with 7 auditoriums in constant flow for the full three days. The program covered all aspects of common orthopaedic practice around arthroplasty and arthroscopy, with a particular emphasis on knees. OA of the hip is pretty rare in India and total hip arthroplasty, whilst still relatively common is far less frequently

performed than TKR. There is a relatively higher rate of AVN of the femoral head, the aetiology of with perhaps lies with the liberal use of steroids in rural areas but can also be post traumatic. One of the proud selling points of the conference was live surgery links to theatres from all around the globe. 12 countries including UAE, US, UK, Italy and multiple sites in India were linked by a reliable connection to large screens in the auditoriums covering techniques and surgery in all forms. 53 different operations were linked, a great way to understand other surgeons opinions and techniques. Of particular interest were the descriptions and demonstrations of multiple graft sources and the tunnel location techniques employed. Of course still no consensus but it would make Knee meetings very short if we did agree on technique and tunnel placement. The catering both during the days and at the evening banquets far exceeded my expectation of Indian cuisine and with a small but powerful UK faculty representation, lead to a thoroughly enjoyable conference. I had the opportunity to present two pieces of work, one on day case unicompartmental knee replacement and the other on the use of surgical high care beds in elective orthopaedics. With all the food and sedentary days entering the conference 5km early morning race seemed like a good way to burn off Kingfishers and curry. 12 laps of the flat hotel circumference brought back memories of trying to remain fit whilst at sea and I soon settled into a rhythm not disturbed this time by 'ship roll' from oceanic swell. In an attempt to return some sporting credibility to England, I set off hard and managed to return a win. The next ISKSAA congress is planned for 2018 in Leeds with Mr. Sanjeev Anand having the enormous task of arranging it. Planned for early summer, it will be, I'm sure, another fantastic event.

After the conference was over my next visit was to Dr Gurinder Bedi in the Fortis clinic, a private network with hospitals located across the city. He works as part of a team and cover all aspects orthopaedics including spines and trauma on calls. The patients pay for the services but are able to just attend the centre and whilst they may have to wait will be seen by one of the team they are seen there and then. Having spent some the morning in theatre, I joined him in the outpatients and saw a young man referred across having been in an RTA far up in the north. He had sustained an open highly comminuted distal femoral fracture with a vertical intercondylar split. It had been fixed but was still significantly displaced. He came with a CT scan and his images and the team spent a long time discussing options amongst themselves and planned to revise the fixation the following day, accepting the 3cm of shortening and planned to deal with that once united. Having had a relatively short day I booked a walking and street food eating tour of Old Delhi. A highly risky maneuver in terms of Delhi's famous eponymous gastro intestinal disease but one that I could not resists, being a huge fan of curry, spice and all things edible. A fascinating 3 hours tasting and witnessing life in Old Delhi with narrow winding street rammed with stalls, shops, traders, vendors and cooking stalls. We also visited one of the Sikhtemples with its attached cooking facilities feeding20,000 per meal from huge cooking vats to catering for free for anyone who needs food, all run on the donations to the temple.

The following day I return towards the previous days hospital but this time to the Indian Spinal Injuries centre. Initially set up by the famous Indian mountaineer H. P.

S. Ahluwalia, who conquered Everest in May 1965 only to be tragically wounded later that year in the Indo-Pakistani war rendering him wheelchair bound. Having been moved around various military hospitals that didn't know how to deal with his injuries he came to the UK, Stoke Mandeville Hospital, to under go rehab. He returnedto India with no funding but his determination and drive to set up the ISIC, a thriving centre of excellence for spinal injuries and more recently, orthopaedics in general. I met Dr Bhushan for the day and watched as his well-oiled team performed a bilateral TKR. They were clearly well practiced and I only heard the surgeon ask for 1 instrument during the case. Each of the next steps was anticipated seamlesslyby the scrub team of 2 and his 3 assistants. The cement was mixed and implants opened with no discernable commands or instructions. This level of understanding is a clear reflection of the 800+ TKRs he performs annually in the centre. He usually has two theatres on each of his 3 days operating a week and only a few days prior he had performed 26 TKR in a day, 8 patients with bilateral and 10 unilateral. Admittedly he did utilise an extra theatre that day! Still an amazing feat.

It was wedding season in Delhi and also, it would appear, conference season. That afternoon was spent in the DOACON 2016 (Delhi Orthopaedic society conference) workshop at the ISIC and the next two days at the main conference. The whole of the Delhi orthopaedic community meeting for a series of updates and educational sessions.

With time left in Delhi short my next visits were back to the state sector. Initially to the APEX trauma centre in Safdarjung hospital. This is the premier trauma unit in Delhi, accepting patientsnot only from Delhi but far and wide. I spend the morning in theatre with one of the 4 consultants, who was fixing an acetabular fracture in a farm worker. Due to the work load there are 2 spinal consultants operating 6 days a week on 50 spinal injuries a month and 2 pelvic and acetabular surgeons operating on 150+ pelvic and acetabular fracture a year. The remainder of the trauma is kept for whatever space might be available and during the night. These shifts are managed by a team of residents who man the ED, wards and theatres. The main cause of injuries are from RTA especially the motorized 3 wheeled tuc tucs. A lethal design, thankfully our equivalent Reliant Robin no longer in service but at least they were an enclosed cabin. Falls from height are also a problem with limited health and safely regulations. I then spent a fascinating afternoon in the emergency department with one of the residents. A large open plan facility with beds along 3 walls and a central triage area. It treats all comerswith patientstriaged and sent for imaging and then referred on. They are then assigned a trolley or the walking wounded stand by the orthopaedic desk and await their management plan. Confidentiality or privacy has no place in the melee and the loudest gets seen next. Patients who need conservative management are dispatched, those who need casts are sent to the plaster room including those who need manipulation of unacceptably aligned fractures and those who need surgery are admitted if space is available in the 300 T+O beds, or one of the other specialties (neurosurgery, plastics and general) if they have concomitant injuries and available space. If there are no beds then patients are redirected to other hospitals. There are also 8 resus bays. These patients are seen by the ED consultant and referred accordingly to the sub specialties. During my few

hours there we saw a multiple stabbing, an RTA with open distal tibia, bilateral heamopneumothorax from rib fractures and multiple thoracic spinal fractures. There wasn't a trauma team approach, despite ATLS being taught 1 floor below on the same day. There's an understanding that if needed the subspecialties are available all the time in the department and can be called upon if required. This is a hugely busy department and I'm sure that a few days there would demonstrate every traumatic orthopaedic injury possible. The hospital it self is becoming a highly regarded teaching facility. I was visited the cadaveric lab, each of the 5 stations with C arm image and operating microscope, where courses are run year round including pelvic and acetabular reconstruction, thoracic injuries, spinal trauma and many more. From previous experience I expect that the cadavers will be fresh rather than preserved or frozen making the experience all the more realistic.

My last day of hospital visits was to the All India Institute of Medical Sciences (AIIMS), a huge facility in Indian terms. I spend the day moving between 5 theatres with the professors of each theatre training and teaching many fellows and residents. Another state run hospital the infrastructure demonstrating its 60 year age but the surgery being performed not hampered by this. I was able to watch a hemipelvectomy for osteosarcoma in a 14 year old, just 1 of 150 primary bone tumour excisions performed a year by the units single orthopaedics oncology surgeon. Also performing over 180 amputations for tumours annually he is over run with 180 primary tumors on his waiting list. Never having spent time in an orthopaedic oncology unit during training, this brief exposure opened my eyes to the scale of the surgery performed. It seemed rather tame to move back to the more familiar territory of bilateral TKR, arthroscopic excision of synovial chondromatosis of the knee and ACLR but none the less an amazing last day to my trip.

My tripneatly demonstrated to me the contrast of life to mine in the UK but also the contrast that exists with in India. The extent of the pathology, the delivery and diversity of health care and training in India has surpassed all my expectations. I will take away many memories and further differing opinions on management and techniques, pathology and surgery the likes and scale of which I had never seen before. I witnessed a health system run via WhatsApp, pretty much the sole source of communicating and referring. I saw our perhaps over stringent health and safety regulations in a new and grateful light.Our enforced laws for motorbike helmets and not using a mobile while driving as having a real benefit to us, of exactly why three wheeled automotive technology is obsolete and that whist queuingin Britain is a popular past time, as with everything Indian they are in a completely different league.

I would like to extend a huge debt of gratitudeand thanks to Dr Pushpinder Bajaj and Dr Maini for their local support and also to ISKSAA and BASK for their sponsorship for the visit and look forward to their visit to Leeds for the 2018 ISKSAA congress.

If you're interested I survived the high risk Delhi street food eating tour unscathed, with out putting to much detail on it.


Maps
Kanonda
Asaudha
ROHINI
HARYANA
DELHI
Sankhol
Bahadurgarh
Soldha
JHARODA KALAN
SHALIMAR BAGH
PASCHIM VIHAR
RAJOURI GARDEN
KAROL BAGH
OLD DELHI
CONNAUGHT PLACE
New Delhi
JANAKPURI
Luksar
NAJAFGARH
JAFFARPUR KALAN
Kharkhari Nahar
DWARKA
Indira Gandhi International Airport
LAJPAT NAGAR
HAUZ KHAS
GREATER KAILASH
VASANT KUNJ
SAKET
Enlarged map
Jhuljhuli
Badsa
Gurgaon Rural
Dhankot
Chandu
Gurugram
KANAHI
Khaintawas
Sihi
Ghata
Google
LONI
Sirora
Salempur
Khora
Muradnagar
Bhenara
Khurd
RAJ NAGAR EXTENSION
RAJ NAGAR
Dasna
Masuri
Ghaziabad
INDIRAPURAM
CROSSINGS REPUBLIK
Chhapraula
Badalpur
UTTAR PRADESH
Noida
SURAJPUR
Dadri
Noida-Greater Noida Expy
MOHAN COOPERATIVE INDUSTRIAL ESTATE
Greater Noida
Faridabad
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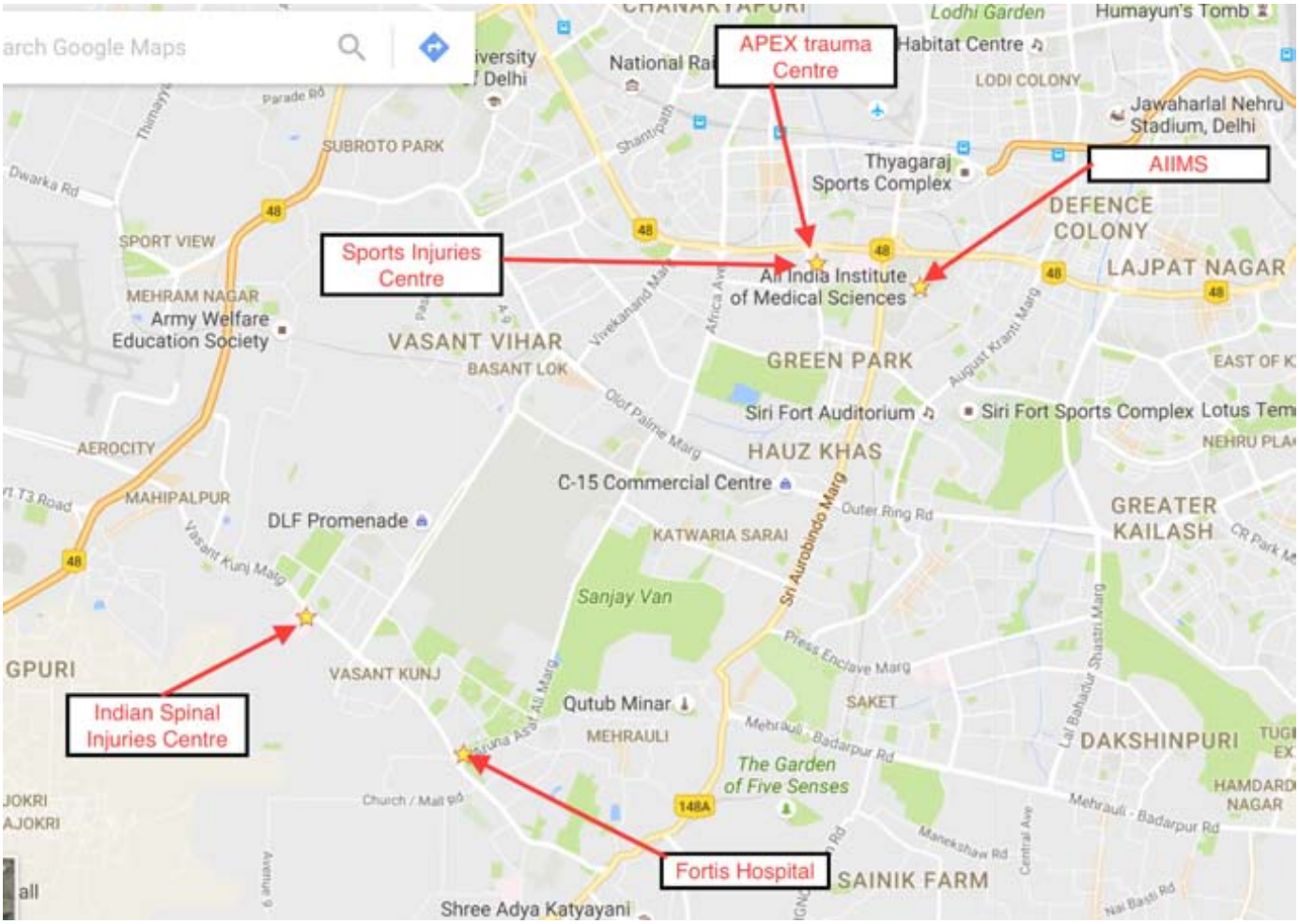
APEX trauma Centre
AIIMS
Sports Injuries Centre
Indian Spinal Injuries Centre
Fortis Hospital
All India Institute of Medical Sciences
Thyagaraj Sports Complex
Jawaharlal Nehru Stadium, Delhi
Habitat Centre
Lodhi Garden
Humayun's Tomb
LODI COLONY
DEFENCE COLONY
LAJPAT NAGAR
SUBROTO PARK
SPORT VIEW
MEHRAM NAGAR
Army Welfare Education Society
VASANT VIHAR
BASANT LOK
GREEN PARK
HAUZ KHAS
Siri Fort Auditorium
Siri Fort Sports Complex
C-15 Commercial Centre
AEROCITY
MAHIPALPUR
DLF Promenade
KATWARIA SARAI
GREATER KAILASH
Sanjay Van
VASANT KUNJ
Qutub Minar
MEHRAULI
SAKET
DAKSHINPURI
The Garden of Five Senses
SAINIK FARM
Shree Adya Katyayani
Dwarka Rd
Parade Rd
Shantipath
Vivekanand Marg
Africa Ave
August Kranti Marg
Olof Palme Marg
Sri Aurobindo Marg
Outer Ring Rd
Vasant Kunj Marg
Press Enclave Marg
Mehrauli - Badarpur Rd
Lal Bahadur Shastri Marg
Manekshaw Rd
Central Ave
Nai Basti Rd
Church / Mall Rd
48
148A


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