Northern Cleft Foundation Outreach Visit to Nagpur January 2018

The Northern Cleft Foundation (NCF) is a well-established charity which has provided 17 years of surgical outreach programmes to India. This surgical outreach provides surgery for cleft lip and palate patients who would otherwise not be able to afford the treatment.

My aims of the NCF outreach visit to Nagpur were:

- Learn new skills by taking advantage of the unique setting
- Gain new opportunities
- Work as a team in a resource poor setting
- Gain experience in developing world peri-operative medicine and surgery

Nagpur has received the NCF outreach for 10 years now using Mure hospital as its base. Nagpur is in Maharashtra state and the main languages spoken are Marathi and Hindi. This year saw the 1000th operation completed. This is a charitable run institution with a nursing school attached which generously provides all the theatre space and ward accommodation to the patients and their families pre and post-operatively.

The Nagpur Rotary club is the main charity which provides funding in Nagpur. They feed all the families in hospital and all the surgical team daily while the outreach is underway. The NCF team are all self-funding to travel to Nagpur and to be a part of the 50-strong team. The local Rotarian doctors

Mure Hospital

are integral to ensuring that a group of patients are found to come to Nagpur annually. They arrange the pre-operative assessments, including haematology and biochemistry. These are vital as 78% of

children in Nagpur are anaemic and 45% are underweight. All patients are seen in pre-operative clinic with UK consultant cleft surgeons, anaesthetists and speech therapy. If deemed unfit for this outreach they are optimised for the following year in terms of anaemia or weight. If a congenital anomaly is suspected, then the child is sent to the paediatric hospital where they are funded by NCF for their care. They will then have their primary lip and palate repaired at a subsequent outreach. Patients are listed on the computer system and full medical records are kept during the period of hospital admission. This allows continuity of care so that patients who receive lip repair are seamlessly invited back the following year for palate repair. The team can provide speech therapy and secondary surgery for fistula, velopharyngeal insufficiency, cleft lip revision and septorhinoplasty.

This year a link was established with a local maxillofacial department which will mean that there is the potential for alveolar bone grafting and orthodontics to be provided to these patients in the future by the local team.

The surgical outreach spanned across six days of operating with pre-operative assessment running daily alongside this and post-operative ward care remaining until the patients are fit for discharge. Resident on call was provided by anaesthetic and maxillofacial registrars. 78 operations were performed across five theatres with six UK consultant cleft surgeons. Our team included all the team that you would expect in an efficient NHS service: specialist ward nurses, recovery staff, anaesthetists, surgeons, scrub practitioners, ODP's, ward doctors, speech therapists, runners, decontamination staff, photographer and a senior theatre co-ordinator. We also had a brilliant group of volunteers who took on the role of play therapists on the ward entertaining the children with crafts and games during the week.

Twin theatres with simultaneous operations

We were a very efficient and motivated team with early starts seeing the first patients anaesthetised by 8.30am.

I was very fortunate to be awarded a travel bursary by the British Association of Oral and Maxillofacial surgeons to travel with the NCF outreach.

I was afforded a unique opportunity to assist primary and secondary cleft palate surgery for six days with six different surgeons. This has given me a huge breadth of operating experience in primary and secondary cleft lip and palate repair.

Fisher, Millard and Pfeiffer lip repairs alongside Sommerlad and Furlow palate repairs were all completed by the team in one week. I learnt about each surgeon's unique way of performing palatal muscle dissection in an intra-velar veloplasty. I also appreciated the way each classical lip repair technique has been adapted by each surgeon throughout their career to achieve high quality reproducible results.

I assisted in secondary speech surgery to lengthen the velum using buccal flaps and z-plasty. The frequency of bilateral cleft patients was much higher in Nagpur than UK norms as most UK surgeons would operate on an average of four bilateral cleft patients a year. This meant I was able to see a complete bilateral lip repair which is unique compared to the UK which typically uses a much more staged approach.

Assisting Mr Mark Devlin

I assisted in 15 operations during the week which included primary lip and palate repair in unilateral and bilateral cleft patients. I also assisted in revision surgery of the palate for velopharyngeal insufficiency and fistula and revision surgery of the lip for whistle deformity. I was fortunate to see a cleft septorhinoplasty undertaken in an adult unilateral cleft lip and palate patient. All patients were given tranexamic acid intra operatively with broad spectrum antibiotics at induction. Out of the 78 patients we had 1 return to theatre for haematoma in a revision palate surgery patient. None of the patients required nasopharyngeal airway insertion following primary palate repair.

I learnt new skills during this outreach programme from the experienced surgical team. During lip repair; the technique for muscle dissection, how to remove the sterile mucosa once the surgical markings are placed and meticulous suture placement during closure of the skin. During hard palate repair; how to raise a vomer flap and suture to the non-cleft side with double-breasted sutures. During soft palate repair; how to perform the muscle dissection and closing the nasal and oral layer using a variety of suture techniques including the looped mattress suture. During secondary palate surgery; how to raise a buccal flap and inset this into the oral layer of the palate.

In pre-operative assessment clinic, I was fortunate to observe consultant anaesthetists and surgeons assessing patients pre-operatively and was impressed about the continuity the Nagpur doctors provide between each NCF outreach. There were over 200 patients seen in clinic over the week with many returning for review with no current surgical needs. I was able to observe many primary and secondary defects and improve my understanding of peri-operative medicine and its limitations in a developing world setting.

In India all surgery was performed with loupes which was very different from operating under the microscope in the UK. Assisting palate surgery was extremely challenging as it was almost impossible not to clash heads with the lead surgeon on the patient's right muscle dissection. I became adept at correct positioning of the patient's head to maximise light and suction. We were operating in twin theatres simultaneously which was a very unique experience with lots of distraction.

I have gained a valuable opportunity to discuss and observe cleft surgery with six current UK cleft surgeons. This has been excellent for career planning towards interface fellowship.

The 50 strong NCF team I believe provides people from the city of Nagpur with a high-quality service in a resource poor setting. This would not have been possible without the tireless organisation over the last 17 years to fine tune this operation. Dr George Teturswamy started this charity and it has grown organically over the years, completing over 1600 operations in the last 17 years.

The team were so dedicated and motivated that we all developed a strong bond together over such a short space of time. It was great to have been part of the NCF team and to have contributed to its success. This type of dedication and motivation is infectious and makes me wish that my daily working environment could be this excellent. I am extremely grateful to have been chosen to travel with NCF.

The NCF Team Nagpur January 2018

I would recommend this NCF outreach to another oral and maxillofacial trainee who would like to expand their knowledge of cleft surgery and who may be considering application for a training interface fellowship.