BSSH THE BRITISH SOCIETY FOR SURGERY OF THE HAND

GANGA MEDICAL CENTRE & HOSPITALS PVT LTD

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GANGA MEDICAL CENTRE

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INTRODUCTION

I would like to express my sincerest gratitude to the BSSH Education and Travel Committee for sponsoring my visit to the Ganga Medical Centre in Coimbatore, India, as well as to Dr. S. Raja Sabapathy and the entire team for their kindness, support and guidance throughout the entirety of my visit. This experience has helped further shape my career in Plastic and Reconstructive Surgery by providing the opportunity to learn from inspirational surgeons at a leading centre for high-volume trauma and reconstructive care. During my visit, I was exposed to a breadth of cases, from blast injuries with mangled hands to brachial plexus and tetraplegia.

The primary aim for this visit was to deepen my experience and insight into the management of complex traumatic limb injuries. Secondary aims included microsurgical exposure, broadening my understanding and exposure to peripheral nerve and brachial plexus injuries, as well as gain an appreciation to a different hospital management system that can efficiently handle high patient volumes.

GANGA MEDICAL CENTRE

The foundation and development of the Ganga Medical Centre is inspirational. It started in 1978 by Dr. JG Shanmuganathan and Mrs Kanavalli Shanmuganathan with seventeen beds and two operating theatres then underwent multi-staged expansions, becoming a specialty centre in Plastic Surgery and Orthopaedics in 1991 after their sons Dr S Raja Sabapathy and Dr S Rajasekaran returned to India following specialty training in the UK and US. The hospital moved to its current premises in 2007 with a separate block built in 2020. At present, the hospital has capacity for 650 beds and 38 operating theatres dedicated to Plastic Surgery, Orthopaedics and Trauma Surgery, making it one of the largest specialty units in this field in South Asia. The Ganga Microsurgery Training Institute was established in May 2000 with over 3,000 surgeons from around the world having been trained by the lab by October 2025.

TRAINEE EXPERIENCE

I started at the Ganga Medical Centre the day after Diwali. A plethora of patients presented with burn and limb injuries associated with the festival. The most notable of these cases was a young 16-year-old boy who sustained a cracker-blast injury to his dominant hand (Figure 1). The hand was severely mangled but breaking down the approach to basic principles from debridement to repair of structures including microsurgical revascularisation of the thumb enabled the senior consultant and myself to establish a normal appearing hand.

Over the course of my visit I spent most of my time balanced between trauma and elective theatres. I attended morning trauma meetings, ward patient reviews and clinic. Trauma review meetings are conducted on a twice weekly basis which serve as an excellent opportunity to summarise the cases completed over the most recent few days, while gaining insights from the large, experienced team of senior consultants. In clinic and on the wards, I was exposed to pre- and post-operative cases. Post-operative outcomes that were particularly interesting to me include a 10-year-old following successful free toe-transfer for reconstruction of an amputated middle finger, demonstrating excellent functional and aesthetic outcome. Other patients included those following cross-leg flap, superiorly or inferiorly based supra-fascial local flap reconstruction for lower limb defects, as well as following abdominal flap reconstruction of large forearm and hand defects.

COMPARISON WITH UK PRACTICE AND SET-UP

Patients treated at the Ganga Medical Centre often presented with devastating traumatic limb injuries but were able to achieve excellent post-operative functional outcomes, including ability to perform basic daily tasks such as feeding and clothing themselves. Treatment at the centre is on a means assessed basis, with all patients receiving exceptional level of care regardless of their financial income.

The difference in patient presentation, expectations and management between the UK and India was very interesting. When managing hand trauma, the cultural importance associated with having a five-fingered hand in India was notable. In the case of large limb defects, a greater proportion of cases at the Ganga Medical Centre underwent reconstruction by means of local and pedicled flaps including fasciocutaneous superiorly- or inferiorly- based flaps for lower limb defects and abdominal flaps for large hand and forearm defects. In the UK, such cases would have been more likely managed using free tissue transfer techniques or with biodegradable temporising matrix (BTM) and grafting at a later date. When discussing this difference in practice, I came to understand that the patients managed at the Ganga Medical Centre typically need a robust reconstruction with the lowest likelihood of failure and the soonest return to daily life, without a need for return to the hospital for secondary surgeries.

The use of anaesthetic blocks as standard for both upper and lower limb cases including free tissue transfer procedures is an aspect of practice at the Ganga Medical Centre that I found creates seamless theatre turnover allowing for high-volume patient care. This is further made possible by the overall departmental set up with sixteen simultaneously running Plastic Surgery theatres, of which five run 24/7 for emergency case management. The work ethic and mindset of all departmental staff including surgeons and nurses is admirable, whereby whatever comes through the door is managed at that point in time- no booking to tomorrow's theatre list, just continued working through the case load.

APPLICABILITY IN PRACTICE AND SET-UP TO GLOBAL SETTINGS

As a Plastic Surgery trainee serving on the committee for the British Foundation for International Reconstructive Surgery and Training (BFIRST), I hope to deliver support to those in low-resource settings later in my career as a consultant. My experience at the Ganga Medical Centre allowed me to appreciate systems in place that can be applied to alternative resource-limited settings. The use of in-house distilled water to replace saline is a cost-effective solution for wound cleaning purposes. A second example, is the use of long-lasting anaesthetic blocking methods to minimise general anaesthetic costs while providing pain relief.

FINAL THOUGHTS AND CONCLUSION

My time at the Ganga Medical Centre has been a truly valuable experience. Being immersed in this environment has allowed me to improve my decision making and deepen my understanding of surgical principles, particularly pertaining to traumatic limb management and brachial plexus injuries.

It has been a privilege to learn from the consultants in this department. I am immensely grateful to the team and to Prof. S. Raja Sabapathy for the wholehearted welcome to the institution, as well as to the BSSH Education and Travel Committee for their generous support, aiding my visitation.

APPENDIX

Figure 1. Pre- and post-operative photographs. Mangled hand following cracker blast injury.

Figure 2. Microsurgical exposure.

Figure 3. Team photo with international fellows.

Figure 4. International UK and US visitors with Dr. Raja Sabapathy.