ELECTIVE (SSC5b) REPORT (1200 words)

Charlotte Maxeke Johannesburg Academic Hospital (CMJAH) is one of two major trauma centres serving Johannesburg, South Africa. For the second half of my 2017 medical elective I was fortunate enough to be able to spend five weeks there on ward 163, the emergency trauma unit, learning all about the immediate management of traumatic injuries.

One of the key differences I noticed between South Africa and my experiences in the USA and UK was the readiness of provisions available to treat the patients as they came in. In the USA, in a privately-funded medical centre, each bed in the trauma unit came equipped with huge stores of equipment; and in the UK, while government funded, equipment is readily available in abundance to be used in an emergency. In South Africa, while the equipment was very similar to that used in the UK and USA, often during a trauma resuscitation somebody would have to search the entire department in order to find something as simple as a syringe to take a necessary blood gas, or even some gauze to help control a haemorrhage. I believe this was likely the result of just how busy the trauma unit in South Africa is; in London there are only 5-10 major trauma victims per day split across 4 major trauma centres, however in Johannesburg the one unit at CMJAH alone would receive that many patients needing resuscitation per day. These resuscitation were in addition to looking after more stable victims of trauma, and the walking wounded coming in with isolated broken limbs or lacerations.

Something I noticed early into my elective in Johannesburg was that only the most necessary investigations are done, and this was something I particularly like. In the UK and USA nearly every patient coming into the emergency department will get a cannula, have a full set of 'baseline' blood tests, and have their urine dipped. While in many ways this is useful for picking up underlying issues, or at least ensuring a patient is fit for discharge, often they are done purely on the indication that a person has come to the emergency department. I found in South Africa there is less of the reflex need to rigorously investigate every patient; if a previously fit and well patient tripped and broke their wrist, they got a history, examination, x-ray, and the pain relief/immobilisation/follow-up needed for a broken wrist without a battery of tests for kidney function and blood count. If, however, a patient came in as a complex polytrauma victim they would receive every test required to diagnose and treat their injuries. In many ways I appreciated this more pragmatic and needs-orientated approach to investigation, and I wonder whether, it implemented in the NHS, it would have prove a safe and useful cost-saving mechanism.

With regards to the mechanisms of trauma cases coming in to CMJAH, there were similarities with both the USA and UK. Johannesburg is a large urban area with many towering buildings as well as high speed roads; this lead to both the high-speed car crashes I frequently saw in the USA, as well as the propensity for falls from height that I have witnessed often in London. It is, compared to the USA and UK, a far poorer country and thus there is a significant level of crime that occurs. While during my time in trauma units in America and England I have seen a number of stabbings, shootings (especially in the USA), and assaults, these were seen at a far higher level whilst in Johannesburg. During my three weeks in the USA I only five or six patients who needed intercostal drains put in following penetrating chest trauma; I would see at least that number every week during my time at CMJAH. I found that these high numbers of traumas requiring practical intervention meant that the teams working in the trauma unit were excellent at practically managing these patients. Whilst often equipment was difficult to track down and numbers of key items ran low, stocks of life-saving interventions such as chest drains were always kept up and easy to find, with everyone knowing how to set them up and what needed to be done. This also meant that it was common for medical students, while closely supervised, to learn and carry out practical tasks such as suturing and insertion of chest drains or even central lines. The practical nature of my time in Johannesburg was one of the best aspects, and the skills I have learnt at Charlotte Maxeke

will be lifelong skills I can take back to the UK and use effectively during my Emergency Medicine rotation next year.

An area of my elective that I found difficult pertains to the poverty and the culture it leads to that I have previously described. A number of patients have not had the privilege of a good education and often don't have the ability to easily access healthcare. This meant that frequently patients would arrive at the trauma unit a number of days following their injury; this rarely applied to life-threatening polytrauma patients, but frequently happened with people who had suffered simple lacerations or broken limbs. One of the cases I remember starkly was a man who had cut his hand five days previously; it was a fairly deep wound down to the muscle and the patient had believed it would probably heal by itself and needed to continue working, so had not come to seek treatment. By the time he presented to the trauma unit his wound was infected and his examination and investigations suggested he now had sepsis. This was just one of a number of similar situations, and I found this difficult because so many people had come in with life or limb-threatening complications which would have been entirely avoidable and treatable had they presented earlier.

On reflection I thoroughly enjoyed my time in Johannesburg and learnt a huge amount about trauma care. Most notably I feel my examination and practical skills have vastly improved thanks to the high number of trauma patients I saw each shift and the excellent teaching and appraisal from the doctors and nurses working on the unit. Despite a lot of differences working in South Africa compared to the UK, nearly all of what I have learnt and done I will be easily transferable to my working life in the UK come August. As I continue to pursue a career in emergency medicine and trauma I fully intend to explore the option of returning to South Africa for a year or two as part of my training, and would thoroughly recommend a trauma elective at CMJAH to any medical students with an interest in trauma.