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A trauma elective in Sydney: How does it compare to London?

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Rhys is currently working as a junior doctor at Queens Hospital, Burton-on-Trent, UK. He studied medicine at Barts and the London School of Medicine and Dentistry, London, UK. He went to Liverpool Hospital, Sydney, in his final year of medical school, for an elective in trauma. He is planning on pursuing a career in emergency medicine, and hopes to return to Sydney at some point to gain experience working in this field.

"Will you see shark bites?" was a question I was asked a few times by other medical students when I told them I was doing an elective in trauma at Liverpool Hospital, Sydney. While I promptly replied this was unlikely (especially as Liverpool is a lot further from the coast than I initially realised), I was secretly hoping I would see something exciting. Although there were no shark bites or kangaroo assaults, I did see some very interesting cases while over on your side of the world, such as a patient who managed to sever his radial artery with an angle grinder and a traumatic amputation of a patient's arm by an industrial machine.

Trauma as a speciality

One of the first things I noticed was that the set-up of the trauma department was different from in the United Kingdom (UK). At home, trauma as a speciality is generally combined with orthopaedics, and there are few surgeons specialising in trauma as a whole. This helped to explain the initial email I received back from my elective supervisor, who said that this was an elective in trauma, not emergency medicine, which made me worry I would be doing orthopaedics for six weeks! The orthopaedic and trauma surgeons in the UK manage the musculoskeletal aspect of the poly-trauma patient's care, and other surgeons are called upon as necessary, for example vascular surgeons. Here there are specific 'trauma' surgeons who specialise after completing general surgical training, and are responsible for the overall surgical management of the trauma patient. This includes following them up on the wards, in the intensive care unit (ICU) and clinic as necessary. This was something I had not come across before. Indeed, trauma surgery as a single speciality does not currently exist in the UK, nor is there a training program. There are, however, some centres that provide more specialist trauma care, such as the Royal London Hospital.

Mechanism of injury

In many ways, the type of trauma I saw in Sydney was very similar to that of London. The majority of the trauma I have seen in both cities is as a result of motor vehicle collisions, which was not surprising. [1] Another common mechanism was falls, with increasingly elderly populations with many co-morbidities contributing to this problem in developed countries. [2] This is now being complicated when the fall results in a head injury, with many of these patients also being on anticoagulants. [2] In both countries, the majority of cases I have seen are therefore a blunt type of trauma rather than penetrating, although stabbings are on the increase in London, [3] and possibly Sydney too. [4]

Accessing trauma patients

At my medical school (Barts and the Royal London School of Medicine and Dentistry) we are proud that the Royal London Hospital (a major trauma centre) is one of the few hospitals in the country with a helipad on the roof. However, they are a lot more common in Australia! I realised that although the mechanism of injury is similar in both countries, the way the trauma service has to be delivered is not – due to the massive difference in geography. As the UK has a much smaller land mass in comparison, patients are rarely more than a few hours drive from a hospital. Clearly, in Australia this is very different, particularly if a patient needs to get to a major trauma centre rather than a small rural hospital. As a consequence, transport is used differently. In London,

the Helicopter Emergency Medical Service (HEMS) is used primarily to treat and bring severely injured patients to an appropriate hospital. This is also the case in Australia; however, the air ambulance is also used for transfers between hospitals. It seems therefore that Australia has potentially more difficulty accessing trauma patients and bringing them to an appropriate hospital than we do in the UK, which may affect patient outcomes. [5]

Major trauma centres

The experience of being in the 'resus room' at Liverpool Hospital was very similar to my experience at the Royal London Hospital. At Liverpool I was very impressed by the slick, coordinated and well-organised trauma calls, with everyone aware of their roles and clearly following the same trauma protocol with every patient. Perhaps slightly strangely, it made me think that if I were to be unfortunate enough to be stabbed or run over on my elective, this was where I would want to go. This meticulous approach to detail in management of the trauma patient and the expert care they receive has evidence to support it. I did not, however, realise what an impact it had – a study in the United States has shown that high-volume trauma centres reduce death from major injury by up to 50%. [6] Major trauma patients who are managed initially in local hospitals are also up to five times more likely to die than those who are taken directly to a major trauma centre. [7] Quite astounding statistics, which added to my increasing realisation of how important these centres are, in collaboration with a well-organised trauma service.

Next stage in care

Experiencing the next stage of the patient's journey was an enriching learning process, something I had not done before. This meant going to the ICU on daily rounds, and seeing the consequences of the traumatic event that brought them into the resus room. It allowed me to see trauma as a disease process rather than a one-off event, and to appreciate the importance of the 'chain of survival.' I was amazed by the many effects that trauma could produce, aside from the obvious broken bones or lacerations. I remember one case where a lady who had been in a motor vehicle collision had seat-belt marks across her chest and abdomen. She presented to the emergency department a few days after the event, complaining firstly of abdominal pain, which was later shown to be traumatic pancreatitis. She later suffered a transient ischaemic attack thought to be as a result of a haematoma that developed within her neck, due to the seat-belt trauma.

Conclusion

My experiences at both the Royal London Hospital in the UK and Liverpool Hospital in Australia were fantastic and provided a good understanding of how a trauma patient is managed. Whilst I may not have had as much hands-on experience as if I had gone to a developing country, being in two leading major trauma centres has taught me a huge amount and has been extremely inspiring.

Conflicts of Interest

None declared.

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