Intensive Care Medicine at Yangon General Hospital, Myanmar

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'Long considered a pariah state' [1], the Republic of the Union of Myanmar is perhaps one of the least well-understood countries in south-east Asia. Since independence was attained in 1948, nearly 70 years of civil unrest has shaped the country's socio-political landscape and was accompanied by years of diplomatic isolation and military and economic sanctions. Whilst Myanmar is now amid an era of dynamic political and economic transition, with democratic aspirations, the healthcare system has been neglected and grossly underfunded over decades of instability. With public health expenditure at 0.4% of GDP in 1995, rising to only 1.0% in 2015 [2], Myanmar has one of the lowest levels of government spending on healthcare in the world. In addition, the country has a disproportionately high level of out-of-pocket expenses (50.7% of total health expenditure in 2015 [2]) when compared to both its regional counterparts and on an international scale. Bearing all this mind, I chose to undertake my elective in Intensive Care Medicine at Yangon General Hospital (YGH) with a little trepidation and mountains of excitement and curiosity.

Arriving at YGH, the flagship and largest hospital in Myanmar, you are greeted by a red-brick Victorian architectural masterpiece - much more imposing than any of the hospital constructions littering East Anglia. With stray dogs roaming the hospital grounds, and hot and humid wards rammed full of beds, over-spilling into the balconies and basements, it was certainly a different environment to the settings of tertiary care that I had encountered before. As you walk through the front doors you are confronted by long corridors neatly lined with people sitting, lying, sleeping, eating, talking, laughing, and, sometimes, crying. With no windows between the colonnades, the rare gush of wind that penetrates the dense humidity gives some welcome relief from the heat but otherwise it's the intense monsoon rains from which everyone hides.

The ICU is a 20-bed facility, the largest in Myanmar, and is operated by anaesthetists with the ability and equipment to provide mechanical ventilation to all 20 patients. Coupled with the history and reputation of YGH across the country means it is often the first-choice of hospital for patients even if they must travel long distances. Thus, I experienced a range of presentations requiring intensive care support that I had not seen before such as tetanus and cobra bites, and gained an insight into the presentation and management of these. However, there was also similarity in conditions admitted to the ICU, to those in the UK, such as severe community-acquired pneumonia, non-communicable diseases e.g. chronic obstructive pulmonary disease and heart failure, and post-operative patients. Observing the differences in managing these patients between YGH and the UK highlighted to me the adverse impact of limited resources in practice – for instance, the unit only had one nebuliser, which was rotated round the beds requiring it in turn. The use of obscure pharmaceutical preparations for purposes such as liver detoxification or multivitamin infusions also drew my attention to how medical practice in a tertiary care centre is still heavily influenced by the historical and cultural roots of indigenous medicine.

One of the most challenging experiences for me was when patients presented in the advanced stages of, potentially curable, disease after doctors at unregulated private clinics had failed to recognise the correct diagnosis and administer appropriate treatment in a timely fashion. This not only made me reflect on the broader state of healthcare in the country, but whether better public education and a society with greater confidence to challenge the medical authorities, would make a difference in cases such as these. For me, this experience clarified one of many weaknesses of paternalistic approach to medicine, and I hope in the future, greater choice, and empowerment for patients will help abolish the abuse of trust and responsibility with fatal consequences.

The effects of a resource-limited healthcare system on patient welfare and resource allocation were further drawn to my attention by a patient at 32 weeks gestation who was admitted to the ICU in respiratory distress. Whilst a severe pneumonia, and possibly H1N1 infection as Myanmar was undergoing an outbreak at that time, were suspected as the cause of the respiratory distress, it was discovered that she had also had a late intrauterine foetal death. Following discussions between the anaesthetic and obstetrics teams, it was decided that it was best for the patient to undergo spontaneous labour. I was partly surprised at this decision, particularly as the obstetrics and gynaecology doctors said they were prepared to wait for up to a month for this to occur before they would consider induction. Though the patient was evidently unsuitable for a caesarean owing to respiratory compromise, I felt that the patient was at increased risk of sepsis and disseminated intravascular coagulation, especially as the cause of the late intrauterine death was unclear. When I enquired further, I was told that resource limitations meant that the obstetricians had to prioritise those who really required induction of labour, and this patient was not a priority because the foetus had already died. Whilst this may not have been the sole qualification underlying the obstetric plan forward, I felt that this was most certainly an experience of the harsh realities of resource allocation in an acute setting. In addition, I felt that this case exemplified the necessity of addressing the immediate, life-threatening presentation in the context of the overall clinical picture. For example, the team considered how to maximise the effectiveness of non-invasive ventilation for the patient, bearing in mind the mechanical effect of an enlarged uterus and consequent reduction in functional residual capacity, and reduce the risk of aspiration. By taking into the account the physiological changes of pregnancy in management of the patient's acute presentation, I gained an insight into the fundamental partnership between clinical acumen and the basic sciences that is required to evaluate the potential benefits and harms of diagnostic and treatment decisions in the care of the whole person in critical care.

During my time in the ICU at YGH, I also gained experience of clinical research, in support of the ongoing partnership between the ICU departments of Addenbrooke's Hospital, Cambridge and YGH. Myself and a student colleague undertook a small cohort study looking at antimicrobial prescribing and the results of microbiological cultures obtained from patients admitted to the ICU. In view of the global importance of antimicrobial stewardship, the aim was to achieve an overview of the community-acquired organisms, endemic to the local area, and an understanding of the resistance patterns of hospital-acquired organisms, to inform effective antimicrobial use. Undertaking basic data collection in an unfamiliar environment, and over a relatively short study period, highlighted to me some of the challenges associated with this, but also solutions to overcome some of the difficulties. Through undertaking this data collection study, this elective proved to be a valuable experience in building professional relationships and communication.

My elective in Myanmar was inspiring, challenging, and rewarding. From my experiences of critical care, working with the ICU team, and hearing the patients' stories, to getting to know the people, their culture, and country, it was a genuine privilege to be able to undertake my elective in intensive care in this country. Even 100 years after Kipling wrote *"This is Burma, and it will be quite unlike any land you know about"*, I think I now have some insight into what he was alluding to.

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[1] http://www.bbc.co.uk/news/world-asia-pacific-12990563
[2] http://data.worldbank.org