Medicine in Mumbai

By Sinead Doyle

In September of this year, I was fortunate enough to spend my elective period in Mumbai, a sprawling, bustling city of 18 million people situated on the West Coast of India, where Bollywood directors live alongside chai-wallahs, the streets throng with rickshaws, street vendors and browsing cattle, and your senses are pervaded by the aroma of rich spices, the sight of laughing children running barefoot through the street, and the sound of prayers resonating from the nearest temple.

Set to be the largest city in the world by 2012, Mumbai is truly a city of contrasts, where the rich-poor divide is ever increasing, and half the population currently live in slum-dwellings without adequate shelter and sanitation, and little or no access to healthcare and education. Due to the booming Financial and Bollywood industries based in Mumbai, however, a minority of the population lead an increasingly wealthy, westernised lifestyle, bringing with it a very different set of problems. It is this diversity of not only economic and social backgrounds, but also cultural and religious beliefs, that makes Mumbai and its people so fascinating, and provides a unique setting in which to study medicine from a very different perspective.

The mainstay of my elective was spent at the P. D. Hinduja hospital in central Mumbai, a 380-bed semi-private tertiary care centre that prides itself on high standards of care and excellent facilities, but which aims to provide treatment to as many as possible through concessionary treatment and free walk-in clinics. I spent two weeks with the Respiratory team, shadowing a Consultant TB specialist, during which time I learnt not only about the presentation and management of TB, but also the social, cultural and economic factors that surround this challenging and crippling disease. I was able to attend daily outpatient clinics, where up to 100 patients from all over the country might be seen each morning, as well as attend ward-rounds, bronchoscopies, lung function testing and teaching sessions. A series of lectures being held as part of an Infectious Diseases Certification Course aided my learning greatly, and I was able to carry out two presentations myself on TB lymphadenitis and Interstitial Lung Disease during teaching seminars.

My experiences both in the outpatient clinics and on the wards were eye-opening, inspiring, and at times extremely saddening, as they highlighted the true burden of the TB epidemic, which now affects over 14 million people in India, the highest rates of any country in the world. On an individual level, TB is a non-discriminatory disease that crosses all socioeconomic barriers, with patients ranging from age six to sixty. For the most fortunate who are able to access treatment, they face at least six months of gruelling drug regimes, often with severe side-effects. For those with more unusual presentations of TB, such as spinal or meningeal TB, treatment may be as long as 12 months, without any guarantee that the infection won't return.

For many, however, it was not the symptoms or the treatment that was their greatest concern (indeed their resilience was often astounding), but the effect that the disease would have on their family, their ability to work, and their role within society. For one 18 year old girl with pulmonary TB, her worry was that the diagnosis might affect her prospect of an arranged marriage, while for another, she chose to stop her Isoniazid treatment (at the risk of reactivating her TB) as it was causing darkening of her skin, a side-effect that within society might suggest she is of a lower caste. For many families, poor living conditions would make the spread of the disease almost inevitable and the costs of ongoing treatment overwhelming.

However, it is not only the economic and social problems that make the management of this disease so challenging, but the increasing virulence of the disease itself, which is causing traditional treatments to become increasingly ineffective in curing the disease. A huge number of patients presenting at the Hinduja hospital were diagnosed with Multi-drug resistant TB, a form of the disease that does not respond to the traditional drugs Isoniazid and Rifampacin, but which relies on a cocktail of 'second-line' drugs including fluoroquinolones, aminoglycosides, and cycloserine. Fortunately, adequate culture and antibiotic-resistance testing of samples (sputum or biopsy specimens) meant that patients were rapidly diagnosed with this resistant strain and treated appropriately. However, this is far from the norm, and there is a sense that while they win individual battles, they are far from winning the war.

For the majority of patients who receive treatment at the large government hospitals across the city, culture is simply too expensive or not available, and so treatment is carried out empirically with whatever antibiotics are available. This was one of the many difficulties I encountered during my second placement at the King Edward Memorial Hospital, a 1800-bed government-run teaching hospital in the south of the city. Its corridors flooded from the monsoon and heaving with patients, sleeping families and stray dogs, it struggles to cope with the 200 new admissions, and thousands of patients seen in the outpatients department each day. Compared to the Hinduja hospital where the standard of the wards is similar to that of the UK, the wards at KEM were overwhelmed and dilapidated, with patients forced to sleep side-by-side on rusty metal beds, or where these were full, share beds or mats on the floor. Due to the huge numbers of patients (the hospital refuses to turn anyone away) and the often late presentations of diseases, there is a large disparity between the demands on the hospital and its ability to meet them.

In the mornings I was able to attend ward-rounds with the General Medicine team, during which clerking and examinations were carried out quickly, without the luxury of privacy or the support of advanced investigations. While I hugely admired the doctors for their humility and hard work in such difficult circumstances, there were unfortunately numerous cases every day where the wrong diagnosis was reached or the wrong treatment offered, simply due to lack of resources.

One case I remember distinctly was that of a young woman who had come to the hospital with severe headaches and visual disturbance. As CT or MRI scanning is not available at the hospital, she was started empirically on treatment for TB as the most likely diagnosis, and sent home for review in three months. On return to the hospital, she brought with her the results of a CT scan that she saved to pay for, which showed she had a large mass lesion in her right frontal lobe. When I met her at KEM, she was due to undergo neurosurgery to excise the tumour, with little idea of the risks or prognosis after surgery. When I asked her doctor whether a biopsy might be carried out or any adjuvant treatment offered, he simply explained that surgery was the only option, and that the surgeons didn't have enough time to carry out biopsies, so they have to "treat them as they see them". Unfortunately this was often the only option, with barely enough resources to treat acute problems let alone chronic disease, and health promotion or prevention being near to non-existent.

During my time at the Hinduja and KEM hospitals, I was able to meet patients who had travelled from all over India for treatment, including many families who lived in rural areas and had no access to a hospital locally. This was fascinating as it allowed me to learn about the wealth of different cultures, traditions, sects and languages that make up the melting pot of Mumbai and the surrounding areas. It also allowed me to learn about a huge breadth of conditions including malaria and dengue fever (which were at their peak incidence due to the monsoon season), organophosphate poisoning, snake bites, and even bull trampling!

It also illustrated the difficulties that not only patients have in accessing regular healthcare, but that doctors have in following-up their patients. One young child of 15 with type I diabetes presented to KEM with renal failure and retinopathy, as she was not able to receive regular insulin treatment locally and blood glucose monitoring was virtually unheard of. While they could manage her diabetes at KEM, the doctors were resigned to the fact that once she returned home to her rural village, she would only deteriorate again without adequate management, a problem they came across on a daily basis.

My experiences also illustrated not only the huge chasm between the rich and the poor within society, but also the common difficulties that underlie healthcare universally, irrespective of the patient's background or illness. For example, while pregnant women at KEM are forced to give birth with up to four other women in the room, often without any form of pain relief or basic monitoring, I was able to observe surgical procedures at the Hinduja commonly seen in the UK, such as a 'beating-heart' coronary artery bypass graft. Furthermore, patients at KEM most often suffered with 'diseases of poverty', such as leptospirosis and dysentery, while those at Hinduja were often facing conditions caused by an increasingly westernised lifestyle, such as hypertension, obesity and heart disease.

However, underlying these difficulties were common, deeply-rooted cultural beliefs that inevitably affected many patient's view of their health and illness. For example, the role of the family is hugely important within society, so that many family members would often be involved in the care and financial support of a loved one, taking on roles that community healthcare workers might take on in the UK. Indeed, the role of women within the family system also has a huge impact on their perception of their health. For example, many women offered contraception at the Hinduja would decline, as they were afraid that this might affect their child-bearing role as a wife, or even suggest they are unfaithful to their husband. In one case, a wife stuck by her husband even after contracting HIV from him, claiming that they were at least now 'closer together'.

Throughout my time at both hospitals, it became clear that there needs to be changes made on a wider scale to improve the health education and awareness of patients, and to put in place disease prevention programmes. There is a very real need to deal, not only with the immediate problems that arrive on hospital doorsteps, but with the underlying causes of the diseases themselves, if the health of the future of the population is to be protected. Health promotion methods will be invaluable, not only in lowering the rates of heart disease and orofacial cancer (caused by the chewing of a highly carcinogenic tobacco), but also in lowering the spread of infectious disease.

Indeed, in the case of tuberculosis, continuing provision of inadequate testing and treatment in government hospitals will only continue to increase the degree of resistant strains. The discovery of a new form called Extreme drug resistant TB, which does not respond to any treatments available and is increasingly present across India, is a frightening wake-up call to the urgency of the problem. While some measures have been taken, such as the country-wide DOTS programme (directly observed short-course therapy), which ensures daily or twice-weekly monitoring of TB treatment to ensure adherence, the increasing cost of therapy and extremely poor-living conditions which many endure mean that this is unlikely to be sufficient to halt the spread of the disease.

Despite these difficulties however, the passion, dedication and determination of the doctors I learned from illustrated how much hard work is already being done to treat so many with so few resources. India is a truly incredible place, where you are greeted with warmth, friendship and humility. I feel truly privileged to have had the opportunity to learn about India and its people from a very unique position, and I am certain that my experiences have changed not only who I am as a person, but how I will practice medicine as a doctor in the future. I hope that one day I might be able to return to India and to Mumbai to see the amazing changes that I'm sure are already underway, thanks to the hard work of so many, and the very real desire to make things better.

I would very much like to take this opportunity to thank Dr Z. Udwadia and everyone within the Respiratory Department at the Hinduja Hospital for welcoming us into their team, and offering us a great deal of knowledge and support. I am also very grateful to the General Medicine team at the KEM Hospital, and the South Asian Health Foundation for their very kind financial support.