

# An Observership in Internal Medicine and Critical Care at King Edward VII Memorial Hospital in Parel, Mumbai, Maharashtra, India



By Chaitan Narsule

With the support of the Suku Nagendran Scholarship for International Medical Studies, I had the unique opportunity to participate in an observership in internal medicine and critical care at the King Edward VII Memorial Hospital and Seth Gordhandas Sunderdas Medical College in Parel, Mumbai, India. My period of study was February 2-20, 2004, and it was perhaps the most significant clinical experience of my medical career!

One of the first things that overwhelmed me upon arriving at “KEM” (which is what all of the local people called King Edward Memorial Hospital) was the sheer size of the hospital as well as the volume of patients. Although there are nine hospitals in the city of Mumbai, eight of these are private hospitals, where patients (who are almost exclusively wealthy) pay for services out of their own pocket. KEM, in contrast, is the only public, government-funded hospital in Mumbai. And, because this city has such an enormous indigent population, all of the poor Indians go to KEM for emergent medical care. Nearly 2,500 patients are hospitalized at KEM, but because the hospital has only 1,800 beds, the remainder often find themselves sleeping on the floors in the hallways in order to receive medical care.

Another thing that I noticed during my observership was the lack of resources that the hospital staff faced every day. For example, during my days in the intensive care unit, it stunned me to see that there were no digital monitors (for blood pressure, heart rate, pulse oximetry, pulmonary capillary wedge pressure, etc.) on any of the beds. I had expected to see one dedicated digital monitor on each ICU bed, since it was the norm during all of my rotations as a medical student in the United States. In another instance, whenever an intubated patient in the ICU required suctioning of airway secretions, a resident would grab a rubber suction catheter from a huge vat containing a sterilizing alcohol solution, use it to suction the patient, clean it, and return it back to the vat for reuse. After having been trained in hospitals where so many resources were disposable, I often felt that I took many of these ‘luxuries’ – from the perspective of the Indian physicians – for granted. Moreover, even the architectural design of the hospital was different from other hospitals that I had rotated in before. KEM was constructed in an “open ward” format. This meant that, instead of having many private hospital rooms in which one or two patients were hospitalized, each ward was one gigantic room where up to two hundred beds would be arranged side by side. In this arrangement, the patients never enjoyed a sense of privacy or periods of quiet time.



*Left*, View upon entering the medical ICU. *Right*, The left half of the medical ICU. Note that there are no digital monitors on any of the beds.



*Left, Another wing of the medical ICU. Notice in this picture (and the previous two pictures) that there are no ICU monitors on any of the beds. Also, notice that the nurse, standing in the left front portion of the picture with her back facing you, is holding a ‘torch’ (which is what a flashlight is called in India). During my time at KEM, I noticed that very few people had penlights.*

By far, the biggest difference between my clinical experience in India and in the United States was in the types of diseases that I saw in India. For example, prior to February 2004, I had never before seen a single case of tetanus in my life. During my observership, however, I saw five cases within the first week. Four of these cases involved patients who were farmers. And, while interviewing them, I could easily identify a common thread among the histories of all five patients. It always was a variation of the same: the patient was usually working outside while barefoot, and stepped on a nail (or some sharp metal object); then, progressively over a period of two weeks, the patient experienced muscle spasms and “lockjaw.” It broke my heart to know that none of the five patients could afford the vaccinations or booster injections that would have prevented this disease.



*Left: The men’s general internal medicine ward. Right: The women’s general internal medicine ward. Both wards are examples of an “open-ward” system. In each ward, about 200-beds were lined up side by side.*

Another disease that I had never seen before in the United States was rheumatic heart disease. On one of my last days at KEM, I evaluated an 18 year-old boy who was in heart failure. I was amazed at the history he gave me, since it seemed as though it came out of a textbook. Years ago, as a child, he had developed a painful sore throat. Then, a month later, he developed fever, chest pain, and shortness of breath that had been associated with a murmur, joint pain (polyarthritis), and

subcutaneous nodules. He had then been hospitalized for congestive heart failure that had been brought on by rheumatic fever. Thereafter, in the years that followed, the patient experienced a progressive worsening in his exercise tolerance, which was ultimately accompanied by a progressive shortness of breath. He was found to have aortic and mitral valve regurgitation as a result of his rheumatic heart disease, and had again developed congestive heart failure. Sadly, his situation was further complicated by financial problems. He needed valve replacement surgery, an operation that would cost his family 100,000 rupees. His family, unfortunately, earned an annual income of only 10,000 rupees. (To put this price in perspective, it might be helpful to know that my application fee to KEM for the elective was 12,000 rupees, or roughly \$255.)

I was further impressed to see two other pathologies that persist in India: leprosy and tuberculosis. For one morning each week, I had the opportunity to shadow physicians in a clinic dedicated to treating patients with leprosy. Often, these were focused, follow-up visits in which the attending physician took a history, and performed a physical examination in which skin smears were prepared from samples taken from the nodular or macular skin lesions of the patients. Also, we had examined our patients for both nerve thickening and associated sensory deficits. Then, these patients were routinely sent home with tablets of rifampicin and dapsone, both of which were provided free of charge by Novartis Pharmaceuticals.

In addition, I saw a new pathology that was altogether unfamiliar to me, called “tuberculoma.” Although I had seen many cases of tuberculosis in the United States, and had expected to see even more cases in India, I was unaware of the various manifestations that this disease had. On our daily rounds through both the male and female medical wards, our team frequently had admitted several young patients – often between 20-35 years old – that presented both with some type of a focal neurological deficit and a history of tuberculosis infection. Our usual evaluation, on admission, consisted of the basic history and physical, as well as a thorough discussion of the possible causes of the particular neurological deficit. The evaluation also included a CT scan of the head, and I would often be surprised to see a mass lesion on the CT scan of these young patients. In fact, when I came across my first patient with these findings, I was initially perplexed at the possibility that such a young patient could have a brain tumor. However, my attending clarified that such lesions actually represented caseating granulomas in the patient’s head, which were predictably causing (based on the location of the lesion and the clinical picture) the deficits that the patient was experiencing.

Still, even though the hospital suffered from scarce resources, I was impressed that the hospital staff was capable of performing several very advanced procedures. For instance, many patients that I saw in the intensive care unit had undergone coil embolization of various intracranial aneurysms performed at KEM. In another case, surgeons were able to use an intravascular stent to completely exclude an abdominal aortic aneurysm, obviating the need for an open repair of the aneurysm. Also, during the three weeks that I had been rotating at the hospital, pediatric surgeons were successful in repairing the hearts of three different children who were born with transposition of the great vessels.

Moreover, I was impressed at how well the allopathic physicians that I worked with were trained. Though they were primarily ‘internists’, they were clearly capable of evaluating their patients at the level of a specialist, which demonstrated to me their mastery of allopathic medicine. For instance, if a medical patient developed a neurological problem, the attendings never ‘referred’ the patients to the neurologists; instead, they evaluated and managed the neurological problem themselves. I was also awestruck at how up-to-date these physicians were with current literature.

They regularly utilized MD Consult and referenced books and journals that were very familiar to me, including textbooks such as Harrison's and Cecil's, and the New England Journal of Medicine (which is available online for free all throughout India). It was clear to me that the type of medicine these physicians practiced in India was the same type of medicine I learned in the United States.



A group photo. From left to right: Amit Balgude (a fellow 4<sup>th</sup> Year Medical Student from Case Western Reserve University School of Medicine), me, and our attending physician, Dr. Dilip Karnad. At KEM, all physicians wore white coats with short sleeves, mainly due to the warm climate. When I was in India during the month of February, the average temperature was 84° F.

My observership in India was truly a life-altering experience that will forever influence the way I will practice medicine. It broadened my clinical exposure to diseases that I had only read about in textbooks. Also, it gave me a unique perspective as to how health care is administered in an entirely different country. Most importantly, it enabled me to realize that allopathic physicians all throughout the world read from the same textbook and practice the same medicine globally.