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FIFTH YEAR STUDENT ELECTIVE: REPORT TO THE MYRE SIM BEQUEST COMMITTEE

Medicine and Malaria in Rural India

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India is a popular destination for students to choose for an 'elective'. It is an immense country brimming over with extremes and, educationally, the range of pathology and of clinical signs to be elicited is fascinating, but perhaps more importantly time spent in India allows a slice of culture to be experienced totally unlike anything one has come across before. It is, however, considerably less popular in June and July as I was soon to discover in these months in 1994, for the heat was just staggering.

The conditions were made more difficult to bear as the area of India in which I spent my elective was the State of Bihar, in the north-east of the country, near Bangladesh. It is one of India's poorest States. The locals freely admitted that the State is crippled by poverty, lack of education and official corruption which all conspire to deny efficient delivery of health care to the countryside. It is also woefully lacking in air-conditioning and refrigerators.

My elective was spent in St Luke's, a mission hospital in the Sahibganj, an overwhelmingly rural area covered in paddy-fields that stretched in every direction. The hospital is a relative newcomer to the area, built in the 1920s by an anonymous gift of a retiring member of the Indian Civil Service. The site is roughly divided into two, on opposite sides of a central compound, comprising the general wards and the women's hospital of obstetrics and gynaecology. The general hospital contained the surgical theatre, three out-patient consulting rooms, a main ward providing about twenty-four beds and a series of smaller wards of about half a dozen beds each. Laboratory and radiology facilities were also on site, and private rooms were available to those that could afford them in an adjoining row of buildings.

Life in the hospital was a curious mix of the clinical and the domestic. In-patients were always surrounded by members of their family, who cooked for them in the hospital grounds. Privacy was a rare commodity and there were times when inquisitive relatives would have to be shooed away from the operating theatre windows, along with the spiders and flies which were a ubiquitous component of the surgical team. Out-patients was a similar parade, with a variety of characters jostling for attention, and in the thick of it all the inexhaustible patience of the doctors and nurses who would perform a variety of basic surgical procedures at the drop of a hat.

St Luke's was not the only source of health care to the surrounding villages, as rivalry was provided by a ready supply of hakims and indigenous healers who regularly filled the beds of the hospital when their efforts failed, only for the hospital itself to be blamed if the patient subsequently died. More respectable were the *Dais*, a traditional midwifery service which provided care across the countryside by a combination of folklore, experience and practical common sense.

With this increasing competition, St Luke's was finding itself in a position familiar to any British doctor of having to compete in the market place, although this was literal in their case. It had just started antenatal clinics in the bazaar which not only provided important health care but also was a useful source of income to a cash-starved hospital. Further work was provided by the training programmes for

the *Dais* as part of a commitment to health education carried out by the hospital, as well as playing host to government primary health care teams who organised outreach clinics and vaccination programmes.

During my stay I was fortunate to be able to go to two such clinics. Arriving at the village after a hair-raising motorcycle ride, we were treated to a welcome reception in which our feet were washed, and flowers draped over our necks. Then to work, with literally hundreds of cases in the course of a day—lots of malaria and kala-azar ('Indian AIDS' as it is known), leprosy (which still carries such grave social implications), boils, TB, malnutrition, scabies and other parasitic infestations, and a broad variety of aches and pains. The diagnoses were obscured by problems in translation, the lack of available diagnostic tests and the brevity of consultations. There was a lot of humour, however. When examining patients the Indian doctors laughed at the short tubing of my stethoscope; they were able to keep the patient at arm's length with great hose-like instruments which were no doubt eminently practical when surrounded by open TB cases.

Treatment was fairly limited—paracetamol and vitamin tablets to those with only vague or unlikely histories (malingering occurs in India, too), chloroquine to the suspected malaria cases and a blood test for the kala-azar patients, as money was available from the government only for cases with a confirmed diagnosis. Minor surgical procedures were also performed, and anyone too ill to be treated in the village was shipped back to the hospital.

Of all the cases presenting in the clinics and as in-patients, malaria was the most common, and also one of the most frustrating as it is so amenable to some simple primary health care measures. Fortunately, it is a recognised problem in India and the government has issued guidelines for malarial control and eradication, centred on a statistic known as the API, or annual parasite index—a ratio of the malaria cases in one year to the population of the sample area. An API>2 has arbitrarily been declared the level at which *extensive* intervention is indicated, consisting of spraying with insecticide, rapid treatment of any cases, and full and thorough entomological assessment and surveillance of the areas concerned to ensure the problem stays away. Despite governmental claims as to the importance of surveillance of malaria, no statistics were available for the Sahibganj region, and so the aim of my research whilst at St Luke's was to establish this most basic fact for the area surrounding the hospital, over the year prior to my arrival.

This involved trawling through the in- and out-patient records which not unsurprisingly were in a poor state of repair, exposed as they were to a tropical climate in a hospital with only limited resources. The final results were remarkable—the 260 residents of the hospital compound had an API of 53·8 (95% confidence limits 39·8–67·8). Even the furthest away villages, where one would expect a lower case presentation (due to a diffusion of cases amongst alternative health services and the transport difficulties associated with presenting to a distant hospital) had an API of 4·5 (2·6–6·4). These unambiguous results presented a clear need for urgent action on the part of the government and it was certainly the hope of the hospital that it would obtain increased funding for the currently low-key insecticide spraying campaigns.

The clear result from my research was an obvious bonus to my elective, but by far the most rewarding aspect was the opportunity to be part of the community for a period of time and experience a totally different type of medicine. For that I am extremely grateful to my hosts, and to the support from the Myre Sim Bursary and the Faculty of Medicine, who were so generous.