

# Indian Medical Colleges

## Calcutta Medical College

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The Calcutta Medical College is the oldest medical college in India. It was founded in 1835 as a result of the combined efforts of both the Indians and the British; wealthy Indians contributed a major part of the initial capital. Although the institution has nurtured many pioneers in medical science, its golden era seems to have ended with the British rule in India.

### EARLY HOSPITALS IN CALCUTTA

There appears to have been a general hospital for Europeans in Calcutta as early as 1707 when the Council of Fort William resolved to build one on 'a convenient spot close to the burial ground'. This site is now occupied by St John's Church where, until recently, the mausoleum of Job Charnock was situated.

The wars with the Nawabs of Bengal and later with the Dutch made it necessary to open a hospital for sepoys. In 1760 a temporary structure of straw and tree posts was constructed at Khiderpore; later a permanent structure was built inside Fort William. A hospital for giving vaccinations was opened at Dum Dum in 1767. The government purchased a private garden house in 1768 which was later converted into the Presidency General Hospital, now known as the Seth Sukhlal Karnani Memorial (SSKM) Hospital.

The first non-military hospital came up at Fouzdari House on Chitpur road, and in June 1814 the first maternity hospital, called the 'Calcutta Lying-in Hospital', was opened on Park Street.

### BACKGROUND

The Calcutta Medical College traces its origins to the first medical school in British India, which opened in 1822 with 20 students. Pundits translated western medical books, such as *The London Pharmacopoeia* into the vernacular, and medical classes were held in Sanskrit at the Calcutta Sanskrit College and in Urdu at the Calcutta Madrasa. The training period was three years; physiology, anatomy, pharmacy and materia medica were studied in the first (junior) year and medicine and surgery in the two senior classes. For clinical training the students had to attend the Native Hospital, General Hospital, the Hon'ble Company's Dispensary, the branch dispensaries at Colingah and Gurranhatta, the Eye Infirmary and the Department of the Superintendent of Vaccination.

Lessons in anatomy were learnt from dissection of lower animals and by witnessing post-mortem examination at the General Hospital. The students also learnt about the great works of Charak and Sushruta as well as those of Avicenna and other physicians of the Arabic school.

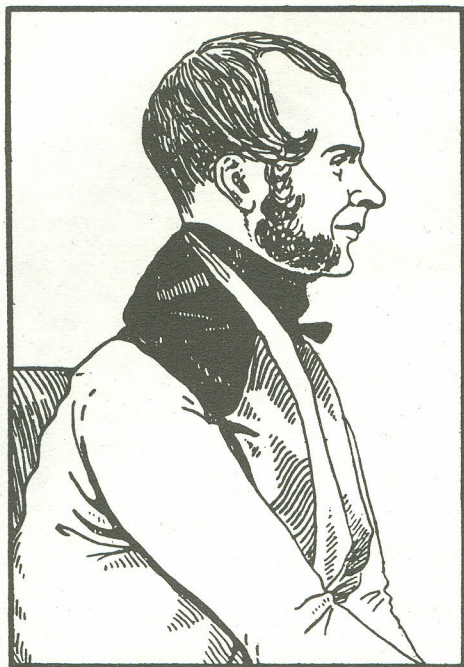
The commendable knowledge acquired by the students prompted the government to open a small hospital for the Sanskrit College students in August 1831. The hospital had 30 beds, and 158 outdoor patients were treated in 8 months, according to the Annual Report of 1833. In the same year, Lord William Bentinck, then Governor-General of India, appointed a committee to report on the status of medical education. The committee members unanimously suggested the formation of a Medical College for Indians, but opinions were divided over the language of instruction. However, 'the Anglicists prevailed over the Orientalists' and English was chosen mainly for utilization of the immense wealth of printed work and illustrations which existed in western medical literature. 'We wish them to be able to drink out of the fountainhead instead of depending to allay their mental thirst with driblets of translation.'

An old house at the rear of the Hindu College became the 'New Medical College'. This was in use till the building was completed at the Petty Court Jail, the site of which included a part of the present physiology and other departments. Fifty young men were admitted on stipends of Rs 7 to Rs 12 per month to the four-year course. The students who passed the final examination could practise medicine and surgery, and if employed by the government as 'Native Doctors' would receive a starting salary of Rs 30 per month.

Initially, the college had no library, museum, apparatus or hospital. Two skeletons were purchased and other anatomical preparations were imported from England. There was also a deep-rooted national prejudice against dissection and the study of anatomy. Anatomy was at first taught through illustrations and models of sheep's brains and goat's livers. It was six months before an entire dead human body was placed on the lecture table. Familiarity with the sight of cadavers enabled prejudice to be overcome and kindled an interest in human anatomy.

On 10 January 1836, Pandit Madhusudan Gupta and four young students secretly followed a Dr Goodeve to an out-house of the college building and watched him dissect a dead body. Indians had finally flung open the gates of modern scientific medicine, and within two years the first students mastered the art of dissection. In his introductory lecture in 1838, Dr Goodeve remarked that his pupils had dissected more than 500 bodies and the magnificent





Dr H. H. Goodeve



Pandit Madhusadan Gupta

rooms which were erected four years earlier appeared too small for his students 'amounting to upwards of 250 youths of all nations, colours, religions and caste coming together in this good work as freely and amicably as the more homogeneous frequenters of an European school. I know nowhere a more striking example of the powerful influence of science, in promoting liberality and good feeling amongst her votaries, than in this very interesting example.'

Regular courses were conducted at the college and actual clinical and therapeutic demonstrations were carried out at the various dispensaries of the city and at the Native and General Hospitals. Babu Dwarka Nath Tagore instituted yearly prizes of Rs 1000 for the different classes of students.

On 1 April 1838—thanks to the liberality of Lord Auckland—a ward of 20 beds was opened as the nucleus for the first college Hospital and an out-patients' department was attached in the following year. In 1839, 70 Europeans and Indians were treated in the wards and 200 patients a day attended the outdoor dispensary. The success of this small hospital prompted the government to build a much larger one later.

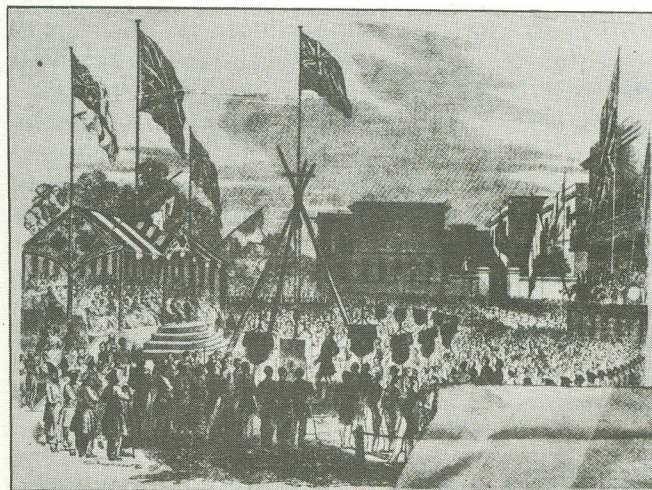
Eleven-students appeared for the first examination of the New Medical college in November 1838 after three and a half years' study of anatomy, physiology, chemistry, natural philosophy, materia medica, botany, physics, medicine and surgery. There was no provision for the teaching of midwifery. The top four students were appointed sub-assistant surgeons on a salary of Rs 100 per month.

By 1839 the institution consisted of a spacious lecture theatre for 500 students, apartments for practical anatomy, a laboratory, museum, library and hospital. In 1840 a 100-bed hospital for women was constructed in the College campus so that instructions in midwifery could be

provided. In 1845 the Medical College was duly registered in England and the period of study extended to five years. In March of the same year four students under the patronage of Prince Dwarka Nath Tagore (grandfather of Rabindranath Tagore) and accompanied by Dr Goodeve left for England for higher studies, which they pursued in 'uninterrupted triumph'.

#### FOUNDATION

The foundation stone of the Medical College Hospital was laid with great fanfare by Lord Dalhousie, Governor-General of India, on 30 September 1848. *The Illustrated London News* of 20 January 1849 reported: 'By the last received overland mail we were favoured by the correspondent with the accompanying sketch of a very interesting ceremony in Calcutta on September 30—the laying of the foundation stone of a large hospital, which when completed



Laying the foundation stone of the old Medical College Hospital



will add even more to the architectural beauty of the city of palaces.' At this stage it was resolved to name certain wards in the hospital in special honour of those 'who had been the chief instruments in procuring so great an addition to the school and city'.

Bazaars and huts lying to the north and south of this big hospital were demolished and the Council of Education collected funds from the public for the excavation of a large water tank in front of the hospital. The hospital was formally opened for patients on 1 December 1852, but was actually occupied by patients three months later. Of the 350 beds, 100 were reserved for Europeans.

The history of the college can be divided into three periods; from 1852 till the turn of the century, from the beginning of the twentieth century till independence, and the post-independence era.

#### 1852 TO 1900

In 1856 a chair of comparative anatomy was created and in the following year the College was affiliated to the newly established Calcutta University. In 1860, by a code of rules, the students were divided into four classes:

1. Primary and Ceylon
2. Apprentice
3. *Hindoostanee* and
4. *Bengalee*.

The students of the Primary and Ceylon class were eligible to appear for the LMS, MB, and MD examinations. The MD examination required that the student be a graduate and have practised for at least 5 years. The first MD was Dr Chunder Coomar Dey.

Dentistry was introduced as a subject in 1861 and a professorship of Hygiene established in 1864. The apothecary class with 823 students was transferred to the Campbell Medical School. In 1874 the minimum qualification for admission was raised to the First Arts Examination. The Eden Hospital was opened in 1881 but was occupied by patients on 17 July 1882.

In 1876 the question to admit women as students was raised and met with a favourable response from Lt Governor Richard Temple. In 1881 this matter was brought before the Medical College Council by the Education Department which not only sanctioned the admission of women into the medical college but also awarded a special scholarship of Rs 20 per month for every woman candidate for her five years of study at the college. Kadambini Ganguly was admitted in 1884 and became the first woman to graduate in 1889. A hostel for Indian women students was constructed in 1884 through a donation by Maharani Swarnamoyee.

Other expansion included the opening of the children's ward in 1886, the Ezra Hospital in 1887, the Shama Churn Law Eye Infirmary in 1891, an isolation block for the Eden Hospital in 1894, a chemistry block and a new medical outdoor block in 1898. On 12 June 1897 an earthquake caused considerable damage to the Hospital.

#### 1901 TO 1947

The turn of the century saw a number of changes in the



Kadambini Ganguly

medical college. From 1901–2 the examinations were conducted jointly by the college professors and external examiners. The LMS was abolished in 1906 and the University instituted the degrees of MO, MS and DPH. In 1910 the Prince of Wales Hospital with 88 beds was founded.

Around 1900 students who had passed the ISc were admitted to the first year of the medical college and those who had passed the BSc could directly join the second year. In the absence of a selection committee the admission procedures were such that students usually had to bribe their way in. A proper selection committee was instituted for the first time in 1917. This consisted of the Principal and ten other members, two of whom were ladies. The selection procedure stipulated an interview, which was just a formality and did not have much bearing on the final selection. In the 1930s the special privilege given to the BSc candidates was abolished and only the top 300 ISc candidates were permitted to apply. The candidates were selected on the basis of merit and preference was given to good sportsmen.

The system of reservation of seats was also introduced during the 1930s. Of the 100 seats, 5 were reserved for ladies, 4 for students from Assam, 4 for those of the Dacca Board, 3 for Nepalese students and 2 for Burmese. The remaining seats were allotted to the general pool of which 52% were reserved for Muslim students.



Around 1913 the Preliminary Scientific MB examination was conducted at the end of the second year. This included physics, chemistry, botany and zoology. The second year course included anatomy, physiology, and pharmacology. At the end of the third year students had to sit for the first MB examination in anatomy, physiology, pharmacology and materia medica. The fourth, fifth and sixth years were devoted to medicine, surgery, midwifery and gynaecology with diseases of children, pathology, bacteriology, hygiene, jurisprudence; ending with the final MB examination at the end of the sixth year. By the 1920s the first 10 students were given scholarships of Rs 12 per month and exempted from paying their six-monthly college fees of Rs 200. Three years clinical training, from the fourth year onwards, concluded in the final MB examination. During the 1920s, out of 120 students admitted only 20 passed out.

In 1940 the course was reduced to five years and was followed by a six month period of pre-registration clinical assistantship. The first MB examination was held for anatomy, physiology, organic chemistry, pharmacology and toxicology at the end of two years. The final MB examination at the end of five years was divided into two parts: a medical part comprising medicine, hygiene, jurisprudence, pathology and pharmacology, and a surgical part which included gynaecology and surgery. A few years later the name of the examination was changed to MB,BS.

The year 1911 was a turning point in the history of the Hospital as the chair of Anatomy was offered to an Indian for the first time, with Dewan Bahadur Hira Lal Basu being the first appointee. To improve clinical teaching a number of appointments in the Medical College Hospital were offered to non-official medical men in the year 1923. Sir Kailash Chandra Bose was appointed Honorary Physician and Major Hassan Suhrawardy was appointed Honorary Surgeon. One of the most important appointments made was that of Sir U. N. Brahmachari, then a senior member of the Provincial Medical Service. The ENT department of was opened in 1923.

These experiments in Indianizing the senior hospital posts proved successful and as a result further appointments were made in successive years. In 1928, Dr S. K. Mukherji and Dr T. Ahmed were appointed Honorary Ophthalmic Surgeons and Drs U. P. Basu and P. Chatterjee as Honorary Physician and Surgeon respectively. In 1930, the posts of Resident Physician and Resident Surgeon which had so far been reserved for members of the I.M.S. were offered to Dr M. N. De and Dr T. Acharjee, both members of the Provincial Medical Service.

In July 1931, the old Eye Hospital (Shama Churn Law Eye Infirmary) was converted into an outdoor clinic. Two new departments—for chest diseases by Dr A. C. Ukil and skin diseases by Dr Amar Nath Gupta—were formed. Besides these, pathological laboratories were attached to many sections of the Hospital and candidates selected for the intern house posts were trained in pathology and biochemistry. Two more noteworthy events occurred in 1934 when for the first time an Indian, Dr L. M. Banerjee was given the professorship of Surgery and Ganga Agarwal,

a woman, the house physicianship to the indoor medical wards.

### THE POST-INDEPENDENCE ERA

Unfortunately there has been no substantial development of the Medical College since the British left India in 1947. In the 1960s, selections were made on the basis of district quotas, the toughest competition being faced by students from the Calcutta district. The interview was no more a formality and was quite rigorous. In 1966 a common entrance examination was held for the Calcutta Medical College, the R.G. Kar Medical College, and the N.R.S. Medical College. In the 1970s this system was modified and after passing the Higher Secondary Examinations candidates had to appear for a competitive Joint Entrance Examination for admission to all the Medical and Engineering colleges of Bengal. Students who qualified were finally selected on the basis of their marks in the Joint Entrance Examination, the district from which they had applied, and the preference for the different medical colleges given by them in their application form. The system of Joint Entrance Examination still continues but the district quota system was abolished in 1978. Also the pre-medical course has been scrapped and students now enter the first year of MB,BS directly.

By the mid-1960s a pre-medical course was included at the beginning of the first year. The basic sciences examination (anatomy, physiology, biochemistry) was held at the end of the second year and the students began their ward posting from the third year onwards. The pharmacology examination was held at the end of the third year and pathology, parasitology and bacteriology, forensic medicine and preventive and social medicine at the end of the fourth year. The final year examination at the end of five years was for medicine, surgery and obstetrics and gynaecology.

During the 1970s political unrest in West Bengal resulted in repeated postponement of examinations and mass copying of examination papers. The last students to follow the five-year system were admitted in 1977. The semester system was introduced in January 1979. There were three university examinations at intervals of 18 months. This has resulted in a remarkable rise in the percentage of students passing from 30% in 1920s to around 85% at present. During the last 42 years the medical college has been reduced to the status of a district hospital in disregard to the fact that this premier institution is a teaching and training centre and not just a general hospital. The government has been indifferent to the needs of the hospital and the college, but has retained full political control in the appointments of the staff, especially the Principal and the Superintendent of the College. Indiscriminate promotions, postings and transfers have adversely affected the standard of teaching and patient care. In the late seventies some of the students lost 2 to 3 years because of delays in the examinations conducted by the University. That the Medical College manages to turn out brilliant graduates despite these problems is a tribute to the teachers and the students themselves.



### Medical Research

This was at its best during the pre-independence era. The names prominently connected with medical research in the institution are those of Sir Leonard Rogers and of Sir Upendra Nath Brahmachari. In pathology, Sir Leonard Rogers introduced the use of intravenous hypertonic saline in the treatment of cholera and in a series of cases in 1908 he was able to reduce the mortality to about half the rate of the previous 11 years. It was also due to his initiative that in 1911 the Government of India sanctioned a scheme for the establishment of the School of Tropical Medicine. About 30 years later, S. N. De, also a Professor of Pathology, showed that the cholera toxin was an exotoxin which altered capillary permeability and resulted in the exudation of large amounts of fluid into the intestinal lumen.

Sir U. N. Brahmachari discovered the effect of urea stibamine in the treatment of kala-azar. In 1922, he reported a series of 8 cases successfully treated by this

drug. In Surgery, Sir Richard Havelock Charles, Professor of Surgery (1895–1905) was the originator of the Charles operation for filariasis. Other important contributions to medical science have been from Sir Kedar Nath Das, Dr Gopal Chandra Chatterji, Lt Col D. McKay, Lt Col Knowles and Lt Col Chopra. One of the major factors which stimulated research in Tropical Medicine was the establishment of the Tropical School in the College.

### FUTURE PLANS

An attempt at modernization was made by the Ex-Student's Association in 1984—the Terjubilee Year. The Chief Minister agreed to erect a modern building housing a library, centralized research unit, museum, audiovisual teaching facilities, etc. and the foundation stone was laid at a very austere ceremony on 28 January 1984. It was promised that the building would be completed in three years, but in the last five years only the foundation stone has become tarnished.

