

History of Medicine

Early decades of Madras Medical College: Apothecaries

RAMYA RAMAN, ANANTANARAYANAN RAMAN

ABSTRACT

The Government at Fort St George determined that a school for instructing and training candidates towards the titles of 'apothecary' was necessary to improve medical help to people in the 1830s. This led to the establishment of the medical school in Madras (presently Chennai) in 1835. The school got renamed as the Madras Medical College in 1850. From 1835, the Madras Medical School offered formal training to personnel to be called either 'apothecaries' or 'dressers' under the superintendence of William Mortimer, who was assisted by George Harding in teaching at the school. Apothecary D'Beaux and Dresser P. S. Muthuswami Mudaliar were subordinate assistants. These apothecaries were recruited essentially under the Subordinate Medical Service of Madras, which was established in 1812 and included non-commissioned medical servants. The Madras apothecaries launched the *Madras Apothecaries Society* in 1864, which aimed at promoting and advancing medical science and knowledge. This society existed until 1871. Formal training of apothecaries ceased in Madras by the later decades of the 19th century, although informal training continued, especially for army cadets and women. Establishment of medical schools in Royapuram (which developed as the Stanley Medical College and Hospital), Tanjavur and Madurai, in the early decades of the 20th century and the 'branch' of Madras Medical College in Calicut during the Second World War changed the complexion of training of medical personnel immensely in pre-1947 Madras Presidency. The Royapuram and other Medical Schools in Madras trained medical practitioners granting the title 'Licensed Medical Practitioner' (LMP). Whether the apothecary-dresser training at the 'old' Madras Medical College had a role to play in these developments remains to be verified.

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The physician's accomplice, undertaker's benefactor and grave worm's provider, an apothecary

—American satirist A. G. Bierce

INTRODUCTION

The General Hospital of Madras started in 1664 as a military health facility in the precincts of Fort St George. In 1763, it moved to its present location, then known as the 'Hog Hill' (*Narimédu, Periamédu, Periamet*). During the time of Elihu Yale,

the Connecticut-born Governor of Madras, the General Hospital facility was improved.¹ The Madras Medical College (MMC)—the teaching facility attached to the General Hospital—was many a time administered by one person, the dean. Occasionally the General Hospital and MMC were administered independently, the hospital by a superintendent and the college by a principal.² MMC completed its 175th anniversary in 2010. This article fills the gaps in earlier publications and makes the story of MMC as comprehensive as possible, particularly by referring to the early decades of its founding and the kind of training it offered in the 1850s and 1870s of the 19th century.

THE MADRAS MEDICAL SCHOOL

The Medical School in Madras (now Chennai) (hereafter, Madras Medical School, MMS) was formally established in 1835, a few days after the establishment of the Bengal Medical School in Calcutta (now Kolkata). From 1835, MMS offered formal training to personnel to be called either 'apothecaries' or 'dressers'. The training offered for both apothecaries and dressers was the same. Europeans and European descendants (referred to as 'Indo-Europeans' by the government and 'Eastern-Indians' by the people and as 'Anglo-Indians' presently) were entitled to use the title 'apothecary', whereas Indians (particularly those from the Madras Army) were to use the title 'dresser'. Before the start of MMS, these personnel, irrespective of whether Europeans or Eastern Indians or Indians, attended army hospitals as voluntary trainees, and after a period of such training, were recognized appropriately.

In Europe, training as apothecaries was popular from the late 18th century. Among the many examples, the English Romantic poet John Keats (1795–1821) features prominently in the list of European apothecaries. Keats qualified for an apothecary's licence on 25 July 1816, although he did not practise as an apothecary in the remainder of his short life.³

One key reason for the founding of MMS was to formally train apothecaries for military and civil service. The Government at Fort St George determined that a school for instructing and training candidates towards the titles of 'apothecary' was necessary to improve medical help to people. MMS started as a private medical 'hall' on 2 February 1835, which was to be superintended by William Mortimer, who held it as an additional responsibility, since he was already superintending the General Hospital, Madras. Mortimer was assisted by George Harding (some references spell as 'Hardinge') in teaching at the school. Apothecary D'Beaux and Dresser P. S. Muthuswami Mudaliar were subordinate assistants.

Through an ordinance promulgated by Governor Frederick Adams, MMS was appended to the General Hospital and was to be financially supported by the state. At this time, MMS existed in temporary sheds located close to the surgeons' quarters in the precincts of the General Hospital, Hog Hill, where a new building was to be built in the next 2 years. This building consisted of four apartments, a theatre, a lecture room, a museum, and a library, built

Princess Margaret Hospital for Children, Subiaco, WA 6005, Australia
RAMYA RAMAN

Charles Sturt University, PO Box 883, Orange, NSW 2800, Australia
ANANTANARAYANAN RAMAN

Correspondence to: ANANTANARAYANAN RAMAN;
araman@csu.edu.au

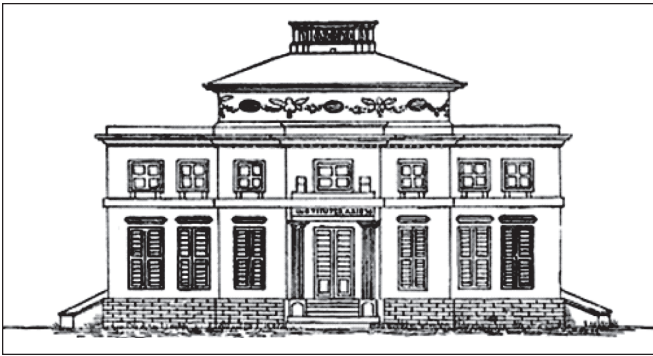


FIG 1. Front elevation sketch of the newly constructed building of the Madras Medical School (1836). Source: A.L. Mudaliar (1939)

at a cost of ₹10 000 (Fig. 1).⁴ The earliest document announcing the launch of MMS is a news item in *The Asiatic Journal* (Fig. 2).⁵ A decade-and-a-half later, the management council of MMS sought the status of a college. MMS was renamed 'Madras Medical College' on 1 October 1850 and from this time, the academic title awarded was 'Graduate of the Madras Medical College' (GMMC).⁶ Keswani explains 'GMMC' as 'Graduate in Medicine, Midwifery, and Chirurgery',⁷ which is incorrect. With the establishment of the University of Madras in 1857 and the MMC being affiliated to it, the award of the title of GMMC was withdrawn and the award of MB, CM was introduced, which was later modified as MB, BS. Award of the 'apothecary' and 'dresser' continued beyond the 1870s, but was restricted to army personnel only.

A detailed report on MMS is available in volume VII of the *Madras Journal of Literature and Science*,⁸ which refers to the 'first' public examination of pupils competing for the titles of 'apothecary-dresser' held in December 1837. This report opens with a grandiose statement:

The erection of an edifice at Madras especially devoted to the cultivation of the different branches of the science of Medicine and the instruction of the Natives of India in that most useful and highly important department of knowledge, is too grand and interesting an event to permit of its being unnoticed by the local scientific journal.⁸

Incidentally, this report uses 'Madras Medical School' formally for the first time. This report also articulates the purpose of MMS:

... Government and the public enjoy the positive and immediate benefit of having well-trained and well-instructed set of subordinates in the medical department and public service.⁸

The public examination of the first batch of pupils held on 13 December 1837 took place in the 'new' building. The event of a formal examination occurring in 1837 indicates that training of apothecary-dressers was conducted over 2 years. The Governor of Madras, John Elphinstone (the 13th Lord Elphinstone) accompanied by members of the medical board, viz. Peregrine Maitland (Commander-in-Chief, Madras Army) and John Sullivan (Judge, *Faujdar Adalat* and Member, Board of Revenue), besides many other persons of distinction, both from medicine and otherwise, witnessed this first, formally held, public examination. Before the examination, Elphinstone inspected the new building and the anatomy laboratory, which was to house the medical museum in the near future. The room where the examination was to take place, this report⁸ describes, was an 'elegant' apartment

NATIVE MEDICAL STUDENTS.

A gratifying report has appeared in the Madras papers, of an examination, lately held there, of the pupils of the Medical School of that presidency. This school, it appears, was recently instituted by government, for the instruction of apprentices in the subordinate medical department. The pupils are between 25 and 30 in number, of whom about one-half are East-Indians; and, with the exception of one Moosulman, the rest are Hindoos. They have been studying only for three months; and their studies have been confined to the classification of medicines, and the first branch of anatomy, which treats of the bones. On this branch of science they were examined methodically, and also in a still more satisfactory and practical way. In one part of the room stood a skeleton, and on a table lay a collection of bones. From the latter, the pupils were required to take any one that first came to hand, and name it; show the character by which they were able to distinguish it from the rest, and then show its place in the skeleton. They sustained the examination in a most creditable manner. Their instructors are Dr. Mortimer and Dr. Harding.

FIG 2. Facsimile of the news item announcing the start of the medical school in Madras (Source: Reference 5, p. 86).

with a gallery, built after such rooms in Europe. The examination was conducted by Mortimer and Harding in the presence of the dignitaries. Mortimer examined candidates in *materia medica* and Harding in *anatomy* (based on the prescribed syllabus, Fig. 3). Further to examining the candidates in the subjects taught, Mortimer and Harding also examined 'promptitude', 'clarity' and 'precision' in them. Governor Elphinstone was 'highly gratified' with the result of the examination. Whether MMS issued the title 'Licentiate of the Society of Apothecaries' (LSA), similar to many of its contemporaries in the UK, or some other academic title, is not clear.

TRAINING TOWARDS APOTHECARY (DRESSER)

Eleven students were admitted into the instruction programme for apothecary (and dresser), with half of them being eastern Indians and the other half of Hindus and one Muslim in 1836. A similar number is cited in Mudaliar,⁴ but the *Madras Journal of Literature & Science* report⁸ mentions 70, which is possibly the total number of students at different levels of learning at MMS over the 3 years (1835, 1836, 1837). Satthianadhan⁹ indicates

The Apothecary department is for military pupils qualifying for employ as military apothecaries and for female students only.

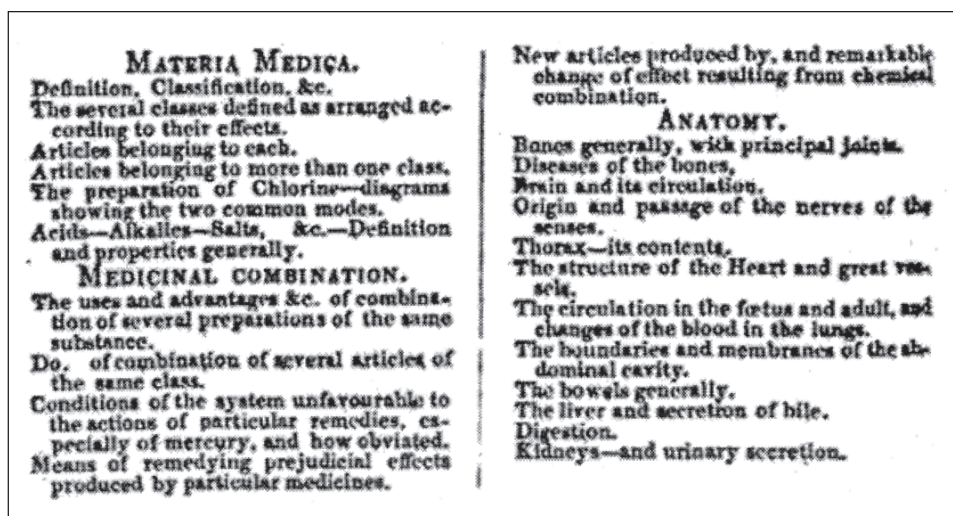


FIG 3. Facsimile of a sample section from the 'syllabus' prescribed for pupils at Madras Medical School aiming to graduate as Apothecaries and Dressers (Source: Reference 8, p. 268).

Madras made an early start in the organized and formal medical education of apothecaries, and the other Presidencies followed this practice with a structured syllabus and regular examinations coupled with appropriate clinical training.¹⁰ Mention of 'two women apothecaries' occurs with no further explanation in Colonel M. Taylor's report (III, p. 49) on the Mental Hospitals of Madras, appended to the Joseph Bore Report on Health Reforms in India.¹¹ This notation probably derives from what Sathianadhan had indicated in his *History of education in the Madras Presidency* that trained women apothecaries served Madras hospitals in the 1940s.⁹

As a teaching facility, MMC was committed to teaching and learning through clinical practice. MMC offered three different learning pathways: to qualify (i) as a licentiate; (ii) as an assistant apothecary; and (iii) hospital assistant. Complying with the three pathways, MMC had three defined departments: the senior, second and junior. The senior department included private scholars and those who had won scholarships. These students graduated as 'Licentiates' after 5 years of study. The second department included students who were deputed from the army and they graduated after 3 years of instruction and training and were eligible for employment as assistant apothecaries. The junior department enrolled students, who were trained to become hospital assistants after 2 years training. New rules introduced in 1865 specified that before commencing their formal studies, hospital training of 2 years had to be undertaken to ensure that all students had a good grasp of both medical terminology and English language. The training for hospital assistants had been further extended to include more medical subjects by 1870. MMC preferred to extend academic training for hospital assistants to 3 years. The grade of hospital assistant was created to replace dressers, but the principal of MMC considered the training of hospital assistants to replace dressers was inadequate.

STRUCTURE OF MEDICAL ADMINISTRATION AND THE SUBORDINATE MEDICAL SERVICE

The medical department, all over pre-Independent India, particularly in the later decades of the 19th century and early decades of the 20th century, was administered by the army medical corps, with the Presidency governments of Madras,

Bengal and Bombay (now Mumbai) maintaining their freedom to administer. However, a general pattern throughout India in medical administration is visible. The Medical Board, which included three of the seniormost surgeons, each holding the rank of a Colonel, presided over the destiny of the medical department in each Presidency. Superintending surgeons, at the rank of Lieutenant Colonel, followed by surgeons at the rank of Captain, and assistant surgeons at the rank of Lieutenant reported to the Medical Board. The Medical Board reported to the Governor. Functions and responsibilities of these medical personnel are explained in McCosh.¹²

The Subordinate Medical Service of Madras, which was established in 1812—the earliest department of this nature in India—included non-commissioned medical servants of European descent referred to as 'apothecary', 'second apothecary', 'assistant apothecary' and 'medical apprentice'; the non-commissioned Indians referred to as 'first dresser', 'second dresser' and 'medical pupil'.¹³ The Clerk and Convey document clarifies (pp. 99–102) the nature of duties and responsibilities of these government servants. The Bengal Subordinate Medical Service includes 'stewards' and 'assistant stewards', in addition to the 'apothecaries'.¹² The term dresser was specific to the Madras Presidency; McCosh¹² does not mention this term. Personnel seeking the titles of apothecary entered hospital service as apprentices on a pay of ₹33 per month and after 10 years of service these personnel were designated 'assistant apothecaries'. Before 1835, the Calcutta Medical School supervised by one John Tytler offered a semi-formal western science based medical training to Indians. The Calcutta Medical School instructed in Urdu. With the start of Calcutta Medical College on 26 January 1835, Tytler's school was closed.¹⁴ Dr M.S. Valiathan (personal communication, email, 30 August 2015) had the following to say: 'The Madras story is different from that of Calcutta, where two schools for natives for Hindus and Muslims were merged to make a medical school. While anatomy, medical botany, pharmacology and other subjects taught were translated from English and to all students, Hindu students were taught *Charaka* and *Susruta* from the second year and Muslims were taught Avicenna. This was later abolished to open a medical school under the Governor General's order under the pressure of many reputed natives, probably Rammohan Roy one among them.' In the

Madras Presidency, before the formal launch of training programmes for the apothecaries, only those who volunteered as apprentices in hospitals were certified as either apothecaries or dressers and none was paid any scholarship as the Bengal Presidency Government did. After 1835, in the newly established Bengal Medical College and in MMS in Madras, the lectures for apothecary trainees in Anatomy, Chemistry, Surgery, *Materia Medica*, *Physic* and *Practical Dissection* were taught in English.¹⁵

The process adopted in Madras to subject the subordinate medical personnel in the ranks of assistant apothecary and assistant dresser to an examination (whether written or oral, is not clear) during promotion to apothecaries and dressers influenced the Bengal Presidency Government in Calcutta. The Bengal Medical Board has the following to say.¹⁶

We concur in opinion ... that it is desirable to introduce in Bengal the regulation which obtains at Madras, for subjecting subordinate Medical Officers to a searching examination, previous to promotion in the Department.

Formal instruction for hospital apprentices was introduced in 1847 in Bengal following the system that had previously been tried and found effective in Madras. The General Order #200 (15 June 1847) is about Apprenticeships in the Bengal Subordinate Medical Department.¹⁶ It sets out that candidates would sit for an examination to become an apprentice. Those successful would serve 2 years as an apprentice in the hospital of a European Regiment or the General Hospital. They may then be selected by the Medical Board for a studentship in the Medical College. They would attend a 2-year course of study comprising anatomy, dissection, *materia medica*, pharmaceutical chemistry, the practice of medicine and surgery and especially clinical instruction supplementing medicine and surgery. At the end of 2 years, they would appear for the examination. If successful, they would be drafted into European Regiments or the General Hospital, and wait their turn for promotion as assistant apothecaries. Promotion of an assistant apothecary to apothecary was also through examination.

In 1867(?), the medical personnel employed by different Presidency Governments were remunerated with a better salary scale. The *Indian Medical Gazette*¹⁵ refers to this as

At length the patience of the members of the Subordinate Medical Department is rewarded

and provides a table of proposed revisions to pay, pensions, and other allowances. The following justification offered in the same document evokes interest:

The European Apothecary, to whom the European soldier naturally, as to a fellow countryman, looked, in illness not only for sympathy but for skill, was in truth an empty vessel. Whilst his brother in Madras, and even the native doctor in Bengal, were acquiring, the former an excellent and the latter very fair, education, the hospital apprentice was receiving, except what the kind-hearted medical officer or apothecary of his regiment might give him, absolutely *none*.

The apothecaries while in public hospital service held the rank of Warrant Officers with the authority to issue arrest warrants to soldiers up to the rank of a Sergeant.¹⁷ They were permitted to practise medicine privately.¹⁸ Details of the formal dress code prescribed for the Apothecaries (Warrant Officers) are available in Cornish.¹⁹

MADRAS APOTHECARIES AND ADVANCEMENT OF MEDICAL SCIENCE

Apothecaries in Madras Medical Service published scientific papers in professional journals, although the frequency of their publication is far and few between compared with those by assistant surgeons and surgeons. For example, a paper entitled 'Case of chylous urine' by George Davis, an assistant apothecary attached to the Primary Medical School of the MMC appears in the *Madras Quarterly Journal of Medical Science*.²⁰ A few other papers, mostly referring to single case studies by Madras apothecaries, appear in various medical journals published from Madras.²¹

The Madras apothecaries launched the *Madras Apothecaries Society* (MAS) on 30 May 1864,²² which aimed at promoting and advancing medical science and knowledge. For instance, at the first business meeting of MAS held on 28 July 1864, a seminar on 'Cholera, its etiology—prophylactic and therapeutic management' was presented by a member of MAS. The cholera aetiology seminar was followed by shorter presentations on 'dog bite and hydrophobia' and 'relationship between nerve force and electricity in cholera management' by two other MAS members. This society existed until 1871.²³

REMARKS

The origins of the term 'apothecary' could be explained as one evolved from the ancient Greek term *apothéke*, which got modified in Early Latin as *apotheka*, in Later Latin as *apothecaries*, leading to the Late-Middle English use as *apothecary*. The term *apothéke* meant a cabinet that 'concealed' things. Later this term came to refer to the keeper of the cabinet(s). The prefix *apo-* possibly also has a link to the term *apadha* (Sanskrit) meaning 'concealment', 'suppression'. A comprehensive summary of the evolution of apothecaries in a global context is available in Allen,²⁴ who indicates that the apothecary's work is included in the Bible as an early profession:

And thou shalt make it an oil of holy ointment, an ointment compound after the art of the apothecary: it shall be a holy anointing oil.

Exodus 30:25

William Shakespeare refers to apothecaries in *Romeo and Juliet* and *King Lear*, where the Shakespearean characters acquire poisons (e.g. the elixir of death, arsenic). The contemporary novelist Joanne K. Rowling too refers to apothecaries in her popular fiction Harry Potter.

The term 'apothecary' presently refers to the person involved in the preparation and dispensation of medication, who in principle, assists a surgeon. For example, in the USA an apothecary is a 'pharmacist' and in Britain a 'chemist'. *Apotheken* and *Apokjeden* mean pharmacy in Germany and Norway, respectively. The work of an apothecary could be seen as the precursor of modern sciences of chemistry and pharmacology, before the formulation of scientific methods.²⁵ In such a context, the evolution of apothecaries (and dressers) in Madras (and Bengal) Presidency appears peculiar that such personnel were recognized more of the medical force, rather than that of the paramedical force, although none of the apothecaries used the title 'Mister' only and not 'Doctor'. Nevertheless, from the early decades of the 18th century, the British apothecaries were permitted to practise medicine, filling space as either modern general medical practitioners or family physicians. The famous overturn of the verdict of the Queen Anne of England by the House of Lords, in the instance of

William Rose case, in 1704, authorized British apothecaries to practise medicine.²⁶ Therefore, it does not surprise that apothecaries were deemed as ‘assistant surgeons’, particularly in the last decades of the 19th century, in India, a British colony until 1947.

With the gradual disappearance of the title Apothecary in the Madras Presidency, the extant apothecaries were redesignated as ‘Assistant Surgeons’ and were recognized as ‘qualified’ medical personnel and registered as medical practitioners under the Indian Medical Act (vide British Library *Collection 116/22 Apothecary Branch: Changes in Rank and Designation of Members*, IOR/L/MIL/7/5293: 1893–1894). The history webpage of the Worshipful Society of Apothecaries of London²⁷ indicates

Although apothecaries were originally what we would call community pharmacists today, their role changed gradually and they became legally ratified members of the medical profession in 1704 as a result of the Rose Case, a key lawsuit in the House of Lords. By the early 19th century, apothecaries had evolved into general practitioners of medicine.

This substantiates the change made in the Indian Medical Act to justify the recognition of licensed apothecaries as medical doctors at the rank of assistant surgeon, who were to work as general medical practitioners for the general public.

The Madras apothecaries were recruited in teaching. For example, when an early ‘formal’ scheme of midwifery training, spreading over nine months, was launched in Madras General Hospital (referred as ‘lying-in hospital’ in official records) in 1854 (Fort St George Gazette, 10 October 1854, p. 1112; OIOC P/249/52, Madras Public Proceedings, 11 March 1856, #21), weekly practical instruction was provided by the Nursing Matron, and was supplemented by lectures in anatomy by the Hospital Superintendent and the Hospital Apothecary.²⁸

The MAS was a novel initiative, since no record of a similar society occurs elsewhere in India. That the MAS aimed at promoting and advancing medical science and knowledge²³ speaks volumes of the professional commitment of Madras apothecaries and dressers.

Notable that from 1869 until the founding of the King Edward VII College of Medicine in 1921, apprentice apothecaries for placement in Singapore were trained in MMC^{29,30} and thus training offered by MMC played a key role in enabling better health management among the people of Singapore.

In Madras, formal training of apothecaries ceased by later decades of the 19th century, although informal training continued, especially for army cadets and women. Creation of Medical Schools in Royapuram (which developed as the Stanley Medical College and Hospital), Tanjavur, and Madurai, for example, in the early decades of 20th century and the ‘branch’ of MMC in Calicut during the Second World War changed training of medical personnel immensely in pre-1947 Madras Presidency. The Royapuram and other medical schools in Madras trained medical practitioners granting the title ‘Licensed Medical Practitioner’ (LMP). Did the apothecary–dresser training of the ‘old MMC’ have a role to play in these developments, needs to be verified.

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