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Medical services in Sudan: a historical perspective

Siddiq Ibrahim Khalil FRCP, FESC, FACC, Professor of Medicine

Medical services in Sudan have evolved through several stages, each bore the characteristics of the political era that dwelled at its time. Based on the nature of medical care and its components we divided medical services in Sudan into the following platforms:

1. Pre-Turkish rule (before 1820)
2. Turk-Egyptian rule (1820-1885)
3. Medicine during the Mahdia (1885-1898)
4. Early British rule (1898-1924)
5. Post Kitchener Medical School (1924)

Pre-Turkish rule (before 1820)

History tells us that the Kushites had well developed medical care; they defined disease, prescribed medicine and practiced a form of surgical practice. They ruled Egypt from 741-656 BC forming the 25th Egyptian Dynasty. The interchange of knowledge and practice of medicine as shown in the surgical procedure, mummification and medicinal products reached a high standard of skill.

Moslems introduced Islamic medicine to the expanding empire that extended to Europe, Africa and Asia. The books of Al Razi, Ibn Sina, Ali Al Magousi and Ibn Al Nafis were the main source of medical knowledge in Europe. The invasion of Sudan by Moslems army in 1276 brought along the era of Islamic medicine to Sudan. The Basir (Tabeeb or Al Mutabib) was considered the wise physician and was entrusted with the compounding of medicines; very often, he had considerable knowledge of medicine and his medical practice was more sophisticated than the crude surgery. The medicaments then available are of particular interest, even today, for they represent the long tradition of Islamic medicine that had been handed down over the generations from practitioner to practitioner. Most of the traditional therapeutic procedures commonly used in the north originated from the rich Moslem heritage in the use of medicinal plants, shrubs, and herbs for curing disease. Diagnosis was often good, which again is a reflection of the tradition that had been handed down from generation to generation of the same family.

The Turk-Egyptian rule (Al Turkia Al Sabigha) 1820-1885

The Turco-Egyptian era introduced western medicine to Sudan. The first few doctors who arrived were European officers of the Turkish army. Small hospitals were erected in the larger garrison towns of Khartoum, Medani and El Obied. Regrettably medical care was only offered to Turco-Egyptian military personnel and that Sudanese were excluded from the new medical facilities. During the first four decades of Turco-Egyptian rule medical and sanitary care were below the standard of the services available in Egypt at that time. Their hospitals were in very bad condition and were overcrowded with sick soldiers suffering from fever and dysentery. However, during the last two decades things improved both in sanitary and treatment methods. By that time quinine was introduced for the treatment of malaria and vaccination against smallpox became widely known(1).

Before the fall of Khartoum to the Mahdia Rule the town had a large hospital operated by the medical corps of the Egyptian army and several drug stores were run in the town by Greek merchants. That hospital was built few building east of Governor Kurshid Palace (the present republican palace)(2). That hospital continued to operate until the fall of Khartoum to Mahdia and the transfer of the capital to Omdurman. The hospital was renovated during Anglo-Egyptian rule and was assigned to the Egyptian army and became the Egyptian Military Hospital. The hospital played an important role in the history of Sudan and was the seat of the White Flag Revolution of 1924. Following the revolt of Sudanese soldiers and the evacuation of Egyptian army from Sudan the hospital was allocated to house the new Sudan Medical Service and presently encompasses the Federal Ministry of Health.

Medical services during Al Mahdia

During Al Mahdia the achievements of the Egyptian trained practitioners were widely recognized in the Sudan. Hassan Zaki, an Egyptian medical officer of Khartoum Hospital acted as medical advisor to the Mahdia government(3). When The Mahdia fell ill with typhus, Dr Hassan Zaki was called to attend to
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his illness and provide medical care\(^4\). However, medicine was mainly practiced by the native healers who represented the backbone of medical care. A fascinating account has been given in Balfour third report (1908) of the healing art practiced by the Sudanese during the rule of the Mahdi and the Khalifa. This account was written by Hassan Zaki who was later employed as a medical officer to the Gordon Memorial College\(^5\).

Medical care was delivered by various groups who were living in Omdurman at that time. Orthopedic procedures were at first wholly carried out by men who were termed bone setters. Drugs were scarce and passed their expiry date, the dispensers were Greek merchants who were the owners of the drug stores. Few prisoners who had some medical knowledge, including Austrian priest Father Joseph Ohrwalder, and few nuns provided nursing care for the sick and the injured. The Daia, or midwife, was a more or less trained woman who attended to the obstetric and gynecological cases.

The Hallag or barber-surgeon performed most of the surgical procedures including circumcision and amputations. He did not possess any special technical knowledge, but was nevertheless regarded as a practical workman. He was a familiar figure with his razor, bleeding horn, and circumcision clamp. It was the custom at that time to be bled once every six weeks, and this kept the barber surgeon busy and profitably employed.

Youssef Michael who was an attendant of the Khalifa reported that during the Khalifa rule there was a single hospital located within Bait al Mal (House of Treasury). Naoum Al Atrash was the doctor in charge while Busaraa and Barber Surgeons were stationed at the market running their own shops\(^6\).

During the Mahdia (1885-98) serious outbreaks of smallpox have been recorded, especially in 1885, 1891 and 1895, and it is probable that by 1898 much of the remaining population of the Sudan had been rendered immune. Small outbreaks occurred in 1898, 1899 and 1900 but appear to have been readily controlled.

**Early British rule**

The British Military Administration started on 2 September 1898 and continued until 19 January 1899 when it was replaced by the Anglo-\text{Egyptian} Condominium. One of the early positive steps that Kitchener had taken was the appeal to erect a College in Khartoum, the Gordon Memorial College. Lord Kipling the famous British poet recorded that event in his poem:

\textit{Letter by letter, from Kaf to Kaf, at the mouth of his chosen men
He has gone back to his city, not seeking
presents or bribes
But openly asking the English for money to buy
you Hakims and scribes.}

 Barely three months have passed after the Battle of Karari when the construction of Gordon Memorial College began (Fig 1).

\textbf{Figure 1: Construction of Gordon Memorial College started at 1899, and completed by 1901. The Photograph shows the Nile side of the main building with the Nile Avenue not yet built.}

It provided the only available western education; primary education started at 1902 and secondary education to train engineers, land surveyors and teachers in 1905. The striking observation is that it did not produce doctors or Hakims as Lord Kipling has speculated.

The early policy of the British regarding the health of the people can be perceived as in Reginald Wingate, the second governor general of Sudan, following statement\(^7\):

\textit{“I believe that the pacification and contentment of these primitive people can be obtained more effectively by medical aid than by any other means.”}

That policy was an early priority that was put into action during the early days of the British Military Rule. The medical corps of Kitchener army provided medical care in field hospitals and some of the houses in Omdurman. The prime objective was pacification of people by medical care.

The early doctors conceived their duties as not only healing the sick, but also helping in administrative, judiciary and politically motivated to pacify the people. Add to that, their jobs were made difficult by the behavior of the natives, at that time, who were shy and distrustful of the new invaders. At many times patients had to be sought and wooed to go to medical facilities\(^7\).

The first British hospital in Sudan was that at Wadi Halfa (1896) which catered for the health of
Kitchener invading army. The medical service at its infancy was composed of only Military doctors of the British Army. By 1900 small civil hospitals were erected in Omdurman, Khartoum, Atbara, Berber, Dongola and Port Sudan. The medical services were carried out by carefully selected army officers. They proved their worth both in vocation and administration. In 1901, the first three civilian doctors arrived in Sudan. Those were Dr EA Gates, Dr Web Jones and Dr ES Crispen. Nurse Pye Moore arrived in 1907 and should be remembered as the first nurse in Sudan and the first matron of Khartoum Civil Hospital. She retired unwillingly in 1930(8).

In 1904, the Governor General decided that the time had come to establish a separate Civil Medical Service. Dr Christopherson was appointed the first director. With the financial constraints during the early days staff for the new medical department had not only to be acquired gradually, but the work of the department itself was to be limited to the northern part of the country.

The leading members of the medical service were British doctors assisted by a number of Egyptian and Syrian medical officers of varying caliber. Statistics given in 1902 showed inpatients as 2,396 and outpatients as 2,6591. In 1903, inpatients totaled 3,357 and outpatients reached 4,0802. Other hospitals in Kasala, Dongola and El Obied followed. Dr Bousfield reported in 1906:

“The main diseases in Sudan were malaria and dysentery, there was, however a striking absence of some diseases encountered at home (England). I have never seen a case of scarlet fever. Rheumatic fever was rare and as a corollary there were very few cases of heart disease except those of syphilitic origin(7)”

During the early years of the condominium Lord Cromer envisaged that the employment of European as medical staff was costly and that Syrians might provide a suitable cadre for work in Sudan(9). The government of Sudan regarded Syrians as Christian and non-Egyptians, politically safer and could be posted to southern Sudan without worry that they would spread Islamic influence. They were graduates of American University of Beirut and the University of Saint Joseph. Edward Atiyah who worked at Gordon Memorial College as lecturer in history wrote that the British were making a class of their own; they showed no interest in Syrians and Sudanese and treated them as second class citizens(10). This was also reported by Syrian doctors who felt the pain of being treated inferiorly and as subordinates to the British doctors. However, that era brought a number of highly intelligent and excellent doctors as Dr Malouf, Dr Al Baz, Dr Yusuf Derwish and Dr Negib Yunis who was granted MBE due to his work in sleeping sickness in the south.

During the first five years (1904-1908) of the new medical department considerable developments were taking place. The British cadre was increased to six, the number of Syrian doctors totaled thirty and three modern hospitals were planned and built in Khartoum, Port Sudan and Atbara. Dr Christopherson was appointed to Omdurman hospital, Crispen to Port Sudan and Hodson to Atbara and Barber. Dr Footner was appointed to the region of Mokwar - El Obied and later became the first senior surgeon in Sudan and the first lecturer in surgery at Kitchener School. Footner has also acted as the doctor in charge of the Lady Baker, the floating hospital at Upper Nile.

Kitchener vision was to avoid confrontation with the Moslem community of Sudan and for that reason ordered to restrict missionary work to Southern Sudan. It is appropriate to mention that Lord Kitchener had insisted that missionary medical work was not to be used as a means of proselytizing and it was until 1917 that prayers were offered in the wards. A medical mission established at Omdurman by Dr A. C. Hall closed on his death in 1903, but was reopened in 1908 in a rented house by Dr PO Lasbery. The first Church Missionary Society Hospital (CMS) was started by Dr Lloyd. In 1910-11, under his direction, this became the first hospital operated in the Sudan by the CMS. The hospital evolved to be Omdurman Missionary Hospital and remained a general hospital until 1945 when the men’s ward was closed and it became Women and Children hospital. But the hospital doctors continued to supervise the work of looking after lepers, Stack Home for the blind and a dispensary at Abu Rouf.

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patients at his tent or rest house and afterwards visit any who were very ill in their Tukuls (Gottia or hut). A number of patients are treated in those Tukuls at one time; a practice that has earned the name Tukul hospitals.

During the first decade of the condominium three main hospitals were operating; Omdurman and Khartoum Civil Hospitals in addition to the Military Hospital in Khartoum. Omdurman Civil Hospital was the second main hospital after Wadi Halfa Hospital. It started to operate immediately after the battle of Karari in temporary buildings and later moved to its present position (Fig 2).

**Fig 2: Omdurman Civil Hospital 1907. The standing person is Dr Christopherson. (© Copyright)**

Omdurman continued to be the capital of Sudan even during the early months of the condominium and the Khalifa’s house was used by Kitchener as an office and residence. Dr Gates was appointed as the doctor in charge. He stayed for one year in Sudan and was succeeded by Dr Christopherson as the hospital director.

From the year 1909 till the outbreak of the First World War the pattern of the Medical Department remained very much the same. The central administrative work was carried out by Crispin from his office in Khartoum. This was situated in the most Easterly of a row of two-storied buildings facing south over Khedivial Square (the square on the southern side of the Judiciary Courts). The offices were on the upper floor. The ground floor had been used at first as an out-patient department. The Khartoum Civil Hospital was accommodated at first in buildings built by Greeks, the best known one being a house belonging to a Mr Ortalani situated to the West of Khedivial Square on the route of the steam tram that ran from the central Khartoum station to the Mogren where it linked up with the steam ferry to Omdurman. Early in 1909 the new Civil Hospital was opened and with the removal of patients from Mr Ortalani’s house the outpatient department in Khedivial Square was closed.

The first building now occupied by Sudan Medical Specialization Board was the main hospital in Khartoum. The pioneering members of staff who took office during the launching of the medical service are shown in (Fig 3).

**Figure 3: Khartoum Civil Hospital 1912. The pioneering staff who started the medical service in Khartoum Civil Hospital; standing from left to right are: Dr Abdul Latif, Dispenser Hassan Labib and Dr Newlove. Sitting from left to right are: Dr Sosson, Dr (Bimbashi) Mohammed Nikhlawi of the Egyptian Army Medical Corps, Dr Christophorson the medical director, Nurse Pye Moore the first nurse in Sudan and Nurse Jones. (© Copyright)**

The third main hospital was built in Port Sudan in a similar plan to Khartoum Civil Hospital. Dr Crispen was the first doctor to start the hospital followed by Dr Waterfield. Athbara hospital was under Dr Hodson who was also responsible for the small hospital in Berber. Other smaller hospitals were started in Diuem, Dongola, Wadi Halfa, Sawakin and Merowe and all were run by Syrian doctors.

It was not until the year 1907 when British nurses joined the service, the first was Miss Pye Moore who trained at St. Bartholomew’s and had been a nursing sister in the South African War. She did not retire until 1930 and then very much against her will. She was joined in 1908 by Miss Jones. Miss Jones had been nursing in Cairo and had been surgical sister to Mr Milton. At first the sisters were accommodated in the Khartoum Hotel which was near the temporary Hospital, but when the new hospital was opened in 1909 they moved into quarters in the west wing. For some years they were the only British nurses in the Medical Department, supervising the nursing of all British patients and those in the Sudanese women’s wards; helping in the operating theatre; keeping an eye on serious cases in any of the men’s wards; sometimes having to be on night duty as well as day.
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Post First World War Period
The First World War came when the Sudan after fifteen years of steady progress was becoming ready to embark on large schemes for the more rapid development of the country. There were still a considerable number of British officers serving in both military and civil posts and the majority of these were withdrawn. The war had two very important effects on the Sudan Medical Service. In the first place it resulted in the service once again coming under complete civilian control. Crispin, as Assistant-Director, had served first under Colonel Matthias and then under Colonel Bray, successive Principal Medical Officers of the Medical Corps of the Egyptian Army. In 1915, Crispin became full director and president of the Central Sanitary Board, and in 1919 he was appointed a member of the Governor-General's Council, positions which he held until his retirement in 1922.

The other important event was the beginning of the extension of civilian medical control southwards from Khartoum. The work on the Gezira dam at Mokwar on the Blue Nile which had been closed down was shortly to be resumed. And the Blue Nile Province which at that time occupied a position entirely to the east of the White Nile would, on account of its cotton production, become economically the most important area in the Sudan. So in 1919, Atkey took over medical supervision of this province with his headquarters at Wad Medani. Civilian control in fact extended as far south as the site of the dam at Makwar close to the old town of Sennar.

More directly south on the White Nile the Medical Department also took over control of the Upper Nile Province with its headquarters at Malakal. Footner was put in charge and owing to the fact that one of the easiest ways of getting about the province was by steamer he was provided with a hospital ship which was named the Lady Baker. It was not an ideal ship for the purpose even after transformation, but it had a dispensary and examination rooms on its lower deck and on the upper deck an operating theatre, beds for eight patients and accommodation for the Medical Inspector. The ship allows the doctor to see patients along Sobat River, Bahr Al Gebel and the White Nile and bring to the hospital in Malakal those who are seriously ill and in need of hospital treatment. Immediately after the war two most important training schemes were inaugurated which were to affect profoundly the expansion of medical work. These were (1) a training scheme for medical assistants to man the dispensaries; (2) a training school for midwives in Omdurman.

The Wellcome Research Laboratories.
Another important development during the early British rule relates to Henry S. Wellcome of the firm of Burroughs Wellcome and Co. who took early interest in the medical affairs of the Sudan. At his own expense he equipped and stocked a pathological laboratory in Khartoum, The Wellcome Research Laboratory (WRL) and accommodation for this was found in Gordon Memorial College. A director for the laboratory Dr Andrew Balfour was appointed and arrived in Khartoum in January 1903 (Fig 4).

Fig 4: The staff of Wellcome Research Laboratory in 1903. Henry Wellcome is sitting in the middle, Andrew Balfour, the first director, is sitting at his right side.

The services of the laboratory were at the disposal of all doctors whether military of civil or private practitioners and many years were to elapse before both the research and routine branches were to be incorporated in the Government Medical Service. WRL had also rendered its service to remote areas along the White Nile course as far as Upper Nile. Two Nile steamers; the Floating Laboratory and the Culex Laboratory were provided by the government and equipped by Wellcome, a service that deserved the name Laboratory on the Nile (Fig 5).11

Figure 5: Laboratory on the Nile. The Photo shows the laboratory with tug Culex attached to it.
The early progress of the laboratory was influenced by Balfour character and his determination to keep it independent of the Medical Service. Balfour, however, accepted to be Medical Officer of Health for Khartoum in addition to his duty as director of WRL. Balfour established a standard of sanitary work that was to influence similar work throughout the country. It was owing to his efforts that in the early days of the century an efficient sanitary system, pure water supply and mosquito-free area within Khartoum boundary were established. Balfour great achievement was appraised by all. Dr Squire the chief physician in Khartoum Civil Hospital reported that by 1905 it was possible to sleep without a mosquito-net in Khartoum with impunity for at least the greater part of the year a benefit that we do not enjoy even by today’s advances in prevention means and methods.

Balfour resigned in 1913 for medical reasons and subsequently served as the first director of London School of Hygiene and Tropical Medicine. As director of WRL he was succeeded by Dr Chalmers. Chalmers engaged himself in research and by the time he retired in 1920 his library contained more than 350 old and valuable books and also a collection of 1500 pamphlets on tropical disease in addition to his book Manual of Tropical Medicine. Chalmers name is further perpetuated in the Chalmers medal of the Royal Society of Tropical Medicine and Hygiene. Chalmers retired in 1920 and was succeeded by Archibald. During Archibald directorship the laboratories were taken over by Sudan Government and in 1925 were transferred to its new quarters facing Kitchener School of Medicine. The cost of the building was met from money provided by the Egyptian Government as part of an indemnity after the murder of Sir Lee Stack and the laboratories were thus named Stack Laboratories. The laboratories maintained their autonomy until the time when Dr Horgan took charge in 1935 when the laboratories became incorporated in Sudan Medical Service. In 1949 Kirk became the last British head of the laboratories a position that he held for three years before becoming the first professor of pathology in University College of Khartoum. He had by this time become a recognized authority in tropical medicine and a reference to his research bestowed him The Chalmers Medal. In 1955, after twenty years in Sudan he left to Singapore and was succeeded by Mansour Ali Haseeb the first Sudanese director. The contribution of another eminent scientist Dr Mohamed Hamad Satti should also be recorded here.

WRL and Stack Laboratories played an important role in the history of medical research in Sudan and those who worked in the laboratories later became world authority in tropical medicine. An additional role that the laboratory played was teaching histology and pathology to medical students and training of doctors and laboratory assistants who maintained a high standard and precision characteristic of that renowned institution. In the field of vaccines the laboratories kept Sudan self-sufficient in cholera, smallpox and rabies vaccines. Pioneering techniques and methods of preparation of these potent lymph vaccines has helped control cholera and smallpox and reduced the incidence of human rabies. WRL research findings were carried into the international community by the four reports of the Wellcome Research Laboratories (WRL: 1904, 1906, 1908, 1911). The reports were produced in lavish volumes with detailed drawings of insects and photographic plates dealing with comparatively obscure scientific subjects.

Medical Service in Gezira Irrigation Scheme: historical aspects.

The First World War had delayed the beginning of work in one of the world’s largest agricultural project. By 1919, the project started and was completed by 1924. The policy behind that scheme cannot be dealt with within the scope of this article and readers are referred to Gezira publications 1925-37. However, it is important to summarize some aspects of the medical service in a project that had played huge role in the economy of Sudan.

The Gezira was a privileged space in term of medical provision: Gruenbaum has highlighted the concentration of medical facilities, personnel and funds in Gezira, as well as the absence of such facilities from villages even a few miles outside the scheme(12).

Medical work in Gezira was overseen by three British medical inspectors, two based in Wad Medani and one at Makwar; two British sanitary inspectors, joined by a third in 1927, supervised sanitary work. Sanitary prevention and medical care were administered in the irrigated areas through dispensaries; each was manned by sanitary hakim, later known as medical assistant, one tamarji and one farash. Dispensaries were intended to provide primary health care, acts as a filter for more serious cases which were sent to hospitals at Medani or Abu Usher and notifications of epidemics. It was later felt that hakim had too many responsibilities over too large area and was thus relieved of his sanitary
responsibilities. Health inspectors, health overseers and mosquito workers were made responsible for the sanitary aspects of the scheme.

The Gezira irrigation scheme with its hundreds of miles of stagnant water, lack of alternative water supplies, poor housing, and dependence on thousands of labor immigrants in poor health, created the ideal conditions for amplification of schistosomiasis and malaria, as well as other epidemic diseases such as relapsing fever and cerebrospinal meningitis. Most immigrants to Sudan during the colonial period were Westerners, a non-racial category that refers to all those coming from parts of west of Sudan such as Nigeria, French Equatorial Africa and west of Sudan who acted as laborers and disease carriers.

Despite the economic benefits and creation of income generating categories, formed by tenants and employed staff, the project was indeed a medical disaster and a great health hazard. This argument is supported by the vast environmental damage caused by the new irrigation system that became the seat for Bilharzia, malaria and seasonal epidemics (13).

The consequences of those endemic diseases have taxed the country’s economy dearly, and have resulted in high rates of morbidity and mortality among the population of the Gezira.

Post-Kitchener Medical School (the post-war era) from 1924

Several themes encompass the Sudan’s post-war medical history: greatly increased expenditure on curative medicine, rapid Sudanisation of the health services, and continuing struggle against disease.

Lord Kitchener, then High Commissioner in Egypt, visited the Sudan for the last time in the summer of 1914. On the night he left Khartoum for Cairo he attended an official reception during which he had suggested the importance of founding a medical school in Khartoum so that Sudanese doctors could be trained in their own country. But in August the first world war broke and the project, like others then under consideration for the development of the Sudan, had to be shelved. In 1916 came the news of Lord Kitchener’s death on his way to Russia during the first world war and a universal desire was expressed to establish a memorial college under his name. The memorial took the name of the medical school he had suggested, Kitchener Medical School.

The school was formally opened by the Governor-General, Sir Lee Stack, on the 29th February 1924, this being his last public act in the Sudan before his assassination in Cairo in November of the same year. The Kitchener School is probably the first medical school with a comprehensive syllabus to be established in Northern Tropical Africa. The site was on what was then the southern boundary of Khartoum, quite close to the railway station and equally adjacent to the civil hospital. The building consisted of a central entrance hall surmounted by a dome and two wings at right-angles. In addition to a lecture-room and library there was a tutor's room and separate laboratories for physics, chemistry, biology, physiology and pathology and a large dissecting-room (Fig 6).

Figure 6: Kitchener School of Medicine 1924, the Tin Lizzie in the front is one of the few cars in Khartoum at that time.

Up to 1924 all British doctors in the Medical Service had been what became to be known as General Purposes Doctors. But on the retirement of Dr Hodson from the Directorship of the Khartoum Hospital and in view of the time that would necessarily have to be spent on teaching, a senior physician and a senior surgeon were appointed and the beds at the Khartoum Hospital were divided between them. The senior physician was called upon to teach medical specialties such as skin diseases and mental diseases while the senior surgeon taught eye diseases and diseases of the ear, nose and throat. For a time the senior physician was also the teacher in gynaecology and obstetrics.

The new Sudanese doctors were to be trained as general purposes doctors and might have particularly in outstations, to cope single-handed with whatever material came to the hospital for treatment. Tropical diseases are considered as part to the medical curriculum and not as a specialty.

The first batch of student graduated in January 1928 (Figure 7). Until first September 1951 on which date the Kitchener School of Medicine was officially incorporated into the new University College of Khartoum, 116 Sudanese doctors qualified, of which number two were women, in the twenty-seven years of the school's separate existence. For a number of reasons no students were selected to commence the medical course in the years 1926, 1937, 1941, 1945
and 1947 and only on four occasions has the number graduating in any one year exceeded seven.

Fig 7: The first batch of students graduating from the Kitchener School of Medicine in 1928. Standing from left to right: Dr Tahir Yousif, Dr Ahmed Akasha, Dr Fadil Al Bushra, Dr Daoud Iskander, Dr Al Nour Shams Al Din. Sitting from left to right Dr Ali Badri, Hashim Bey Al Baghdadi, Dr Amin Al Sayed.

With developments taking place in the educational system of the Sudan and in the Sudan Medical Service, the Kitchener School itself was naturally affected. The appointment of additional specialists to the Medical Service resulted in Mr A. R. McKelvie taking over the teaching of ophthalmology in 1930 and in Mr J. S. Hovell, the first member of the Service to obtain the MRCOG, taking over the teaching of midwifery and obstetrics in 1934. While the same year Miss E. Hills-Young, D.N., Matron of the Khartoum Hospital, gave the first course of lectures on nursing.

Teaching of the preliminary science subjects was taken over by the newly organized School of Science at the Gordon College. Students who had previously done one year's elementary science at the Gordon College and one year at the Medical School were now given two years at the School of Science. The total course was thus raised to six years, two at the School of Science and four at the Kitchener School. However by 1940 a further change was effected by contracting the preliminary years to one and a half year and in 1946 to one year only.

In 1946 full recognition was given by the London Colleges of Edinburgh recognized the diploma of KMS for the purpose of examination for MRCP. By 1949 the Royal College of Surgeons of England did the same for FRCS. The Royal College of Physicians of London was already committed to accept graduates of KSM for MRCP (London).

In 1932 all military British and Syrian medical officers were dispensed with. The Medical Corps of the Sudan Defense Force (a relic of the Medical Corps of the Egyptian Army) was replaced by civilian doctors taking over this work in addition to their other duties. So that then for the first time the Director of the Sudan Medical Service became responsible for the medical work of the entire country. A reorganization of the control of work of Headquarters was begun which was completed three years later in 1935 when the Stack Laboratories were incorporated into the Medical Service. There were then three sections dealing respectively with clinical work, preventive work and laboratory and research work, each section being administered by an Assistant Director designated Assistant Director Hospitals, Assistant Director Public Health, and Assistant Director Laboratory Services.

The division of work at headquarters was gradually carried to a lower level with the appointment of Provincial Medical Officers of Health. But it was not till 1951 that the ten provinces were each supplied in this way. From that time the doctors attached to hospitals were able to devote their time entirely to clinical work leaving the Public Health work and the supervision of the smaller hospitals and dispensaries to their public health colleagues.

In this year, 1938, the Service establishment had reached the following dimensions. British doctors totaled forty-four of which four were occupying administrative posts at headquarters and five were graded as specialists in medicine, surgery, obstetrics and gynaecology, ophthalmology and public health. One was registrar or dean of the Medical School; two were bacteriologists and the remaining thirty-two occupied positions in the Provinces. There were sixty-three graduates of the Kitchener Medical School and two Syrian doctors were still employed in Equatoria. There were in addition 251 Sudanese medical assistants manning the dispensaries.

Hospitals were now classified as A, B and C types, and totaled thirty-nine. "A" hospitals numbered six, were fully equipped and were permanently staffed with British doctors and nurses in addition to Sudanese doctors. There were ten "B" type hospitals situated at important provincial centers and twenty-two of the smaller "C" type. There was the Hospital Ship the Lady Baker, capable of accommodating up to forty patients, and a fast motor launch for inspection of medical facilities in Dongola (Fig 8).
Fig 8: Early operating room. The patient is anaesthetized by ether (chloroform) given on a mask at a district hospital.

Medical Service in Sudanese-Eritrean-Ethiopian Boarder during the Second World War.

In June 1940, Italy declared war and the next six months was a period of grave anxiety for all concerned with the welfare of the Sudan. In addition to the men of the Sudan Defense Force (SDF) there were three British battalions in the country with a maximum of 2,500 men to guard the strategic centers of Khartoum, Atbara and Port Sudan while in Abyssinia and Eritrea the Italians had a force of some 300,000. Kasala was occupied early in July, but deceived by the energetic measures taken by the SDF. Among Sudanese officers who achieved high levels of bravery and heroism was General Talaat Farid of the November Revolution 1959.

Both Woodman and Hunt were in Abyssinia, as well as Drew from the Sudan Medical Service were appointed in charge of the medical corps in Kassala. Woodman with a Commission in the British Army was for a time in Addis Ababa and Hunt accompanied the Emperor Haile Selassie on his re-entry into his country. With Hunt was a Sudanese doctor, Osman Yousef Abu Akar was awarded the MC (medal) for devotion to duty in action in the Kassala area. Dr Abu Akar later worked as medical director for Khartoum Civil Hospital during the early sixties. His house is now occupied by Khartoum Teaching Dental Hospital. In 1943, two other doctors distinguished themselves during the Second World War in North Afirica (Al Alamain) at the wing Base Hospital in Tripoli: Dr Zein el Abdin Ibrahim and Mohamed Ahmed Ali both received the MBE as a reward for the special services they rendered.

Sudanisation of Medical Service

From the year 1904 until the end of the Second World War, i.e. in 1945, during the course of just over forty-one years there had been four civilian Directors of the Medical Department or Service. During the remaining nine of the fifty years under review another four British Directors were to occupy the same post. Lorenzen succeeded Pridie in 1945. Pratt followed in 1948 retiring in 1951 on his appointment as Consulting Physician to the Sudan Government in London. Drew was Director from 1951 to 1953 and finally Richards from 1953 until in 1954 he handed over to the first Sudanese Director, Ahmed Ali Zaki.

With the creation of Sudan Legislative Assembly in 1948, Sudanese ministers were appointed for the three most important technical departments; Health, Education and Agriculture. Dr Ali Badri became the first Sudanese Minister of Health and Mr Abdul Rahman Ali Tahe Minister of Education. Dr Ali Badri was elected Fellow of the Royal College of Physicians in 1952.

Within the service and within the establishment of the new Ministry of Health changes were also taking place rapidly and Sudanese Doctors were acquiring new responsibilities. In this respect, the service was well in advance of any other section of the government. And this enabled the Sudanese members of the service to staff their Ministry of Health rapidly and efficiently. In 1945, the number of senior posts held by Sudanese doctors, such as, had previously been allotted only to doctors with European qualifications, was sixteen. By 1949, the number had risen to twenty-three and by 1953 it was thirty-six. During nine years thirty-seven Sudanese doctors took postgraduate courses in UK and twenty six diplomas and higher qualifications were obtained by them.

There was a new trend in the internal pattern of the service. In earlier days the senior doctor in a province was named Province Medical Inspector. He was not only in general charge of all medical and public health work in the province, but he himself usually took an active part in the clinical work of the main hospital. But as the size of the Class A hospitals increased and as both medicine and surgery became more and more highly technical and complicated disciplines specialization became inevitable. And so, by 1953 teams of specialists were forming in all the provinces whereas earlier specialization had been confined to the central hospitals of Khartoum and Omdurman. In this year 1953 and including those attached to the central hospitals thirty specialists’ posts had been created. These were nine posts for physicians, ten for surgeons and six for obstetricians and gynecologists. And in addition, two ophthalmic surgeons, two chest physicians and one psychiatrist had their own clinics.

R McN Buchanan was the last British Senior
Post-independence Medical Service

Ministry of Health has now replaced the old Sudan Medical Service. The minister is a political figure who executes the government policy regarding health services. The head of the medical and non-medical staff is the under-secretary who directs the performance of the ministry and executes the health plan of the country. He had three assistants: assistant under-secretary for departments of hospitals, laboratory and research and public health.

The senior member of the Service in each province was now renamed Province Medical Officer of Health (PMOH). He represented the Central Ministry of Health and as administrative head of the province medical staff all correspondence with headquarters passed through his office. Though no longer necessarily a clinician he was responsible for all medical and public health work within the Province area in a supervisory capacity. This would include the running of the smaller hospitals and of the dispensaries, maternity and child welfare clinics, general sanitation and antimalarial measures, control of epidemics and dissemination of propaganda. The clinical work of the major hospital would be carried out by the newly organized specialist services assisted by general purposes doctors who would also be in charge of the smaller hospitals.

The Ministry of Health Administrative System remained the same through the sixties, seventies and eighties without major changes. Few additions and modification occurred during these decades, summarized as follows:

On the treatment aspects few hospitals were opened in the districts and towns with large population. Specialist care was extended even to the district hospitals. New single doctor hospitals were opened and some are categorized as hardship areas where doctors are rewarded by given more credit during competition for higher studies abroad.

Specialized service in cardiovascular disease, neurosurgery and chest medicine were provided at Shaab Hospital. Nephrology, gastroenterology and orthopedics specialties became available with few specialists coming back from United Kingdom and provided their expertise. In 1979, the first catheter laboratory was launched and in 1984, the first coronary care unit operated in Shaab hospital. Cardiac surgery became available during the seventies in the form of closed mitral valvotomy and later open heart surgery was inaugurated in 1980 with Professor Magdi Yacoub and Donald Ross both taking major role.
The concept of primary health care was implemented and new primary health centers were opened in cities and large towns during the sixties and seventies. School health initiatives were well underway in the form of screening of school children and national Polio programs.

In Gezira province, WHO launched Malaria Prevention Program with Sennar as headquarters. However, after few years the program did not achieve its objectives and was abandoned. Although more effort was spent in bilharzia control programs, morbidity and mortality from bilharzia continued to increase, putting additional load on the frail health facilities.

Faculty of Medicine in Khartoum expanded its intake to meet the growing demands of the country for doctors. University of Gezira provided additional medical graduates following its inception in 1975. This then brings to a close the history of the health service in Sudan which might be said to have now grown beyond the expected ends. British doctors who were privileged to work in the Sudan during these years, and they totaled considerably more than a hundred, mostly gave of their best. And in the early years they were ably seconded by as many Syrian colleagues. But it was not till the Sudanese were given the opportunity of equipping themselves for medical work in various spheres and degrees that it became possible to provide some sort of cover for the greater part of the country and its increasing population.

This article was originally delivered as ‘Professor Siddiq Ahmed Ismaeel memorial lecture’ during the first conference of the Sudanese Heart Society in January 2013, Khartoum. I have attempted to summarize nearly a century of development in the health field with the intent of documenting and availing this part of our history to the future generations. I have covered the present history up to the end of the eighties and as briefly as I could. I must acknowledge the information that I obtained particularly form the work of Dr HC Squires who was physician in different parts of Sudan from 1908-1930 and from 1938-1951 was Sudan government’s consulting physician in London.

Medicine is a rapidly changing discipline and as the years pass by immense changes are expected to occur both in the increase of health facilities, number of professional staff, equipment and treatment methods. I expect that another account of health services is desirable especially if written after the next fifty years and hopefully some of those who read this article will be alive to view the next report.

References