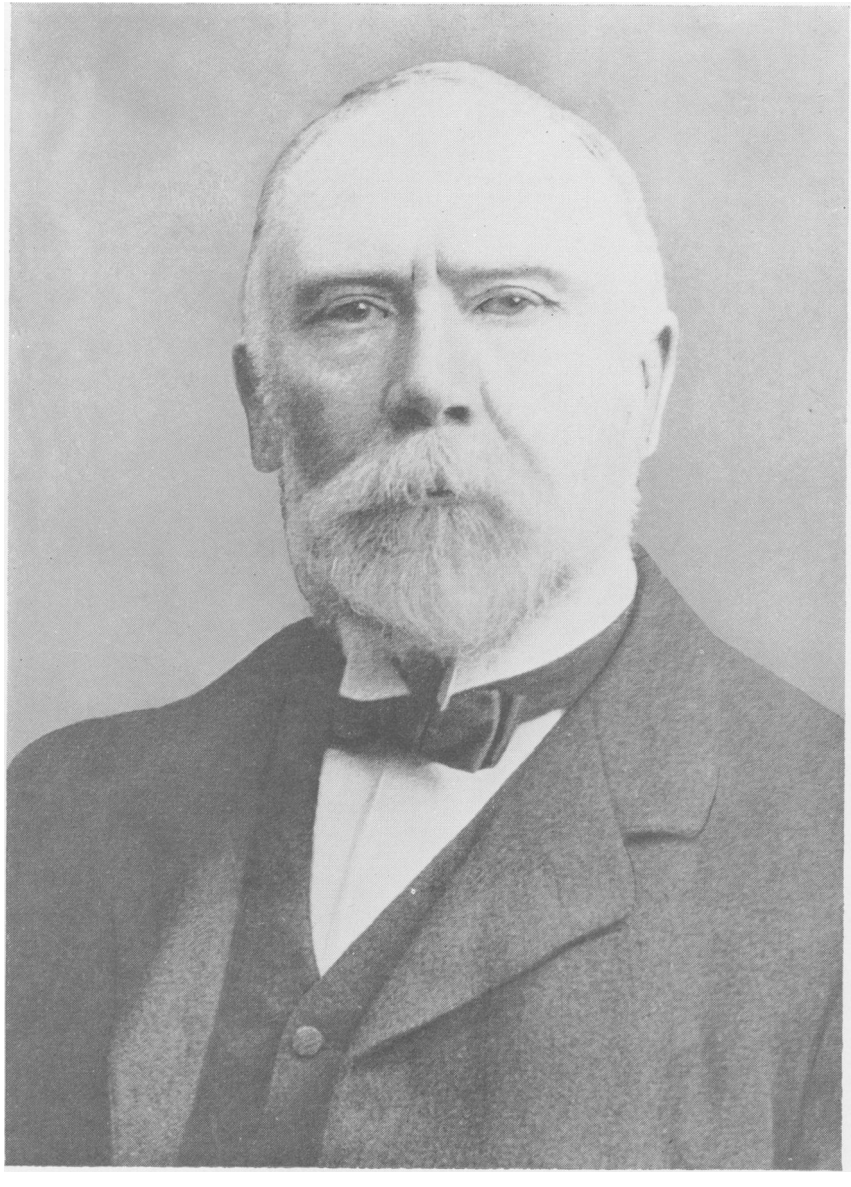

Sir James Mackenzie (1853-1925)

From an original photograph in the Wellcome Historical Medical Museum and Library

By courtesy of ' The Wellcome Trustees '

MEDICAL PRACTICE IN THE DAYS OF MACKENZIE*

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THE appointment of James Mackenzie lecturer is one of the highest honours in the gift of the College. Looking back over the lengthening list of orators, I am conscious of my own shortcomings, but at the same time deeply grateful for the honour the Council has bestowed upon me.

The achievements and the broad pattern of the life of Sir James Mackenzie must be well known to all of you. I do not intend to describe them again in detail. Rather it is my object to try to place the young Mackenzie in his environment and to show the forces which drove him on to advance the study of cardiology in so unique a manner.

James Mackenzie was born in 1853, the second son and third child of Robert and Jean Mackenzie. His parents farmed a small farm, Pickstonhill, at Scone in Perthshire. He was educated at the village school at Scone and at Perth Academy. Leaving school at the age of 15, he became apprenticed to a pharmacist in Perth. Work in a pharmacist's shop then, as now, must often have been of a para-medical nature and advice been given as well as medicine sold. The unsatisfactory nature of these services, rendered without any knowledge of the medical sciences, must have made a youth of Mackenzie's inquiring nature wish to study medicine. As soon as he had served his indentures he matriculated at Edinburgh University.[1]

The student at Edinburgh

At the age of 20, with a greater knowledge of drugs and medicines, and of the world, than was possessed by most of his fellow students he brought to his studies unusual maturity. Whilst at Edinburgh

*Being the twelfth James Mackenzie lecture given in Committee room D at B.M.A. House on 20 November 1965. Reproduced by courtesy of the editor of the *Practitioner*.

Mackenzie must have met and listened to many famous men. The notes that he took of Lister's lectures are preserved.[2] Lister's method, probably a continuation of that of his father-in-law James Syme, was to give an account of a condition and then to illustrate it with patients. The same case was sometimes shown on several occasions.

Lister was enthusiastically demonstrating the results of aseptic surgery.

" If prevent putrifaction for first five days there will be no danger—granulation going on—but before granulation—nerves are tender and tissues open to absorb poisons." " When there is . . . no scab or moisture—union by first intention has taken place. In books said that in union by first intention there is ' adhesive inflammation '. None here . . . inflammation in whatever degree is invariably a cause of weakness—and the less the better if none process of organization will be quicker ". How hard Lister hammered home his discovery may be gathered by occasional jottings throughout these notes of " Antiseptic theory again " or " germs again ".

The notebooks of James Mackenzie show that he was a regular attender at lectures and a good note-taker. The statement that he was an undistinguished student may be discarded. During his student life he won two gold medals. We may picture the young Mackenzie sitting at the feet of the great Lister and not only being taught the latest in surgery but also learning far more important lessons. It may not be too difficult, given the opportunity, to make great discoveries and it is possible, though laborious, to collect sufficient evidence to satisfy oneself of their validity; but to convince the world of their importance is a task of almost insuperable difficulties. All this was achieved by Lister in his lifetime; it was also achieved by Mackenzie in his general practice in Burnley. How much the example of Lister was consciously in his mind he never said, but, as we shall see, Lister was on friendly terms with both Mackenzie's partners in Burnley. In later life, Mackenzie wrote of note-taking:

" My recollection goes back to my student days, with a sense of distaste for the boring fatigue of taking notes (and transcribing them) on the subject of which I was absolutely ignorant . . . among those lectures, a few stood out for the pleasure there was in attending them. . . . "[3]

He would borrow full notes from students who had previously attended these lectures and would read them before the lecture so that he could sit and " listen with an intelligent interest and appreciate the demonstrations, undisturbed by the necessity of taking hurried notes ". Lister's lectures were not systematic and, as he chose for his subjects any case that was of interest in his wards, notes were necessary, but Mackenzie made the shortest *aides-mémoire* as he listened.

Rickman Godlee described the scene when Lister was lecturing;

the capacious operating theatre holding four to five hundred students packed up to the top row, with the floor 'area' surrounded by chairs for distinguished visitors, and the four dressers in their blue check aprons bringing in the patients in a wicker basket. "The lectures gave what no book could supply, and for this reason were never tedious, but held the close attention of the students," and Lister's lack of respect for the textbook may have encouraged a healthy scepticism in his students.[4]

Practice in Burnley

Mackenzie qualified in 1878 and soon after was *locum tenens* in a colliery practice at Spennymoor in County Durham where he was paid two pounds a week with free board. It was here that he was introduced to club practice for the first time.[5]

Next year, Mackenzie became an assistant to Drs Briggs and Brown of Burnley. The partnership which he entered was no ordinary one. Little has been written about the two men with whom Mackenzie was associated for many years. The senior partner, Henry Briggs, was a fellow student with Joseph Lister at University College Hospital where it is said he was present when Robert Liston performed his first operation on a chloroformed patient—this was probably the amputation under ether in 1846. ("This Yankee dodge, gentlemen, beats mesmerism hollow!") He became M.R.C.S. in 1849 and was granted the L.S.A. in 1850, these being the diplomas then required for general practice. He was a demonstrator in anatomy in University College Hospital and became M.D. of London before going to Burnley in 1855. Eight years after Mackenzie joined the firm he retired on account of ill health and settled in Southport where he became a justice of the peace.[6]

John Brown, who was a cousin of his namesake the author of *Rab and His Friends*, had spent his childhood in South Africa where his father was a missionary and had studied medicine at Aberdeen University graduating M.D. (with honours) and C.M. (with highest honours) in 1863.[7] In 1864 Brown returned to Cape Colony where he married and spent ten years building up a successful practice in Wynberg, before returning to Edinburgh to become Lister's dresser and demonstrator in anatomy at the University. In 1877 he took the diploma of public health of Cambridge, and in 1878 the F.R.C.S. of England and a degree in public health at Edinburgh. In Burnley, he became a justice of the peace. In 1903 he retired from practice and returned to the Cape.

For the year of his assistantship, Mackenzie lived with Briggs; then for the next seven years until he married, he lived in close intimacy with the Browns.[8] It is evident that John Brown was no

ordinary doctor. Nor was his wife an ordinary woman but one who was ever willing to spend her time in relieving the poor and helpless.

When John Brown was negotiating his partnership with Henry Briggs he asked Lister for a reference. Lister wrote:

" He is remarkable alike for his high moral character, excellent abilities, and intimate acquaintance with the profession in all its branches. What is also a matter of no small importance, he is a gentlemanly agreeable man with whom you would find no difficulty in getting on. I only wish more of our practitioners up and down the country had such qualities as you and he have . . . "[9]

Brown settled in Burnley in May 1879 and in August the same year Mackenzie joined him as an assistant. Mrs Brown wrote, " a great friendliness had existed between us in his student days in Edinburgh and his coming was a great comfort and help ".

Many years later Mackenzie was to write . . .[10]

" I was fortunate to serve under two doctors with exceptional attainments, one being a shrewd general practitioner of many years experience, and the other a surgeon of no mean ability. Our practice comprised all classes, the bulk being of the working class.

" It was an old-fashioned practice of many years standing and we followed the old custom of dispensing our own medicines. It will be seen that the type of practice was not of a very elevated order, but nevertheless I am now thankful that it was of that kind for the simple reason that having to assist in the dispensing of drugs, I had the opportunity of judging the effect of remedies which I otherwise would not have obtained, and having that opportunity, I was able to make some observations on the actions of drugs, a position which pharmacologists with all their magnificent opportunities had failed to achieve ".[11]

After his year as an assistant, Mackenzie was given a third share in the partnership but in their entries in the *Medical Directory* neither Mackenzie nor Briggs ever mentioned the third partner whereas Briggs always included the name of Brown. Whatever the true facts, Mackenzie and Brown brought method to the practice. Mackenzie's day began, as all days should, with a cup of tea at 7 a.m. after which he worked until breakfast at eight. At 8.45 a.m. he met his partners in the surgery and planned the morning's round which usually lasted till dinner at one o'clock. Thrice weekly there was an afternoon surgery lasting until tea time. After tea there was an evening surgery. This sharing of the work enabled him to play[12] his round of golf twice a week. We may infer that Brown and Mackenzie alternated for Sunday duty for Mrs Brown writes that on alternate Sundays when her husband was in the surgery, it was a relief to get out for a bicycle ride—this often ended in a navvie's camp where she would instruct the men in religion and temperance.

Burnley lies 22 miles north of Manchester. In 1880 its population was 55,000; by the time that Mackenzie left its population had increased to almost 100,000. It was prosperous. It had well-paved streets and an abundant supply of water. It possessed a Literary

Institution and an Exchange, a Church of England Institute with a considerable library, a free grammar school and several charities. There were public baths, a small isolation hospital and a large workhouse infirmary. Its staple manufacture was cotton, which in 1872 gave employment to 16,000 men and women of 20 years and upwards. There were calico printing, machine making, brewing, tanning and several other important industries; there were iron mines and stone quarries in the neighbourhood. Although the working population of Burnley was beginning to learn the benefits of thrift, drunkenness and crime were widespread. In a town whose industries depended on the hard manual work of its inhabitants—including boys and girls of 14 years and upwards, life must have been very hard for most of them, and the family doctors must have rubbed shoulders with many rough characters and entered many unsavoury slums.[13]

The town contained perhaps the greatest number of long chimneys for its area of any in England, and the medical officer of health reported frequently on the pollution of the atmosphere by immense volumes of smoke. By the end of the century Burnley claimed to be the largest textile manufacturing town in Europe; that is with the largest number of looms. These looms were worked by women, and their children were given out to be nursed by women who were often quite unsuitable for the work and certainly untrained. This custom contributed to the terrible child mortality. Seldom less than half the annual total of deaths were of children under five and one-third of them never reached their first year.

The medical officer for Burnley was Thomas Dean, M.D., who was first appointed in 1875 and held office until 1906. He was a part-time medical officer and in 1879 his salary was £60 per year. Dr Dean's reports gave a vivid account of the morbidity and mortality in Burnley during the years in which Mackenzie practised there. We learn that in 1879 there was commercial stagnation in the town and many houses were empty. People were unable to pay rent and families were herded together. In 1881, out of a population of 60,000, 15,700 were relieved by the Poor Law; in spite of this the death rate was the lowest but one for five years and the returns of 20 local friendly societies showed that the sick rate of 17.5 per cent was only 1 per cent above the average.

The wastage of young life in our manufacturing towns was appalling. Death came in various guises. In 1876 Dr Dean reported that, out of a total of 699 infant deaths, seven died of smallpox, 79 of measles, 43 of scarlet fever and 57 of typhoid or diarrhoea. One hundred and thirty-seven died of pneumonia or bronchitis; five only of injuries. Remarking on this mortality he gave his opinion that contagious diseases amongst children are most difficult to prevent and adds:

" I see no sure way of extinguishing these diseases but gradually educating parents in sanitary laws, and eradicating from their minds the dangerous and deep-rooted notion that children are fated to have such diseases, and the sooner they have them the better ".

He was convinced that a better knowledge of the infectious diseases was being acquired by the working population of the borough. At the same time he presented an original method of preventing scarlet fever. " . . . if the skin of the little patient were rubbed now and then with olive oil or oil mixed with some disinfectant, fully one half of the scarlet fever cases would be prevented ". He attributed many of the cases of infantile diarrhoea to bad nursing and bad feeding; particularly he condemned the giving of solid food to babies before they had " teeth to chew it or saliva to mix with it ".

In 1884, there were 160 deaths from diarrhoea; this Dr Dean rightly attributed to the accumulation of night soil in tanks close to houses not being emptied thoroughly or frequently enough. The trouble was that the sanitary department only emptied them when notice was given by the householders.

" We have for instance, many places where the closets and ashpits are a long distance from the householders who use them but are close under the windows of the houses of burgesses who only know them by their stink; these are known as cluster closets, serving rows of back-to-back houses or old houses and cellars without back premises. I know a place . . . where there are about 24 privies etcetera very close to a man's bedroom window and at times the stink is fearful".

In this year (1884) compulsory notification of disease was first introduced in Burnley. It " worked admirably; it is one of the good things obtained by the last Act of Parliament for it enables the sanitary department to act with promptness where time is of great value ". Before this time, notification of infectious diseases was limited to cholera, introduced in 1875, though prior to 1879 some authorities such as Bolton, Bury and Leicester had attempted to introduce such a measure. Bolton had used an Improvement Act for the purpose and imposed a fine of £10 on medical men for failure to report cases of infectious diseases occurring in their practices. At Leicester a fee of not less than 1s. 0d. or more than 2s. 6d. was offered for every notification, but this was considered by the doctors as an imposition " insidious, inquisitorial and destroying the social confidence imposed in them ".[14] Universal notification of infectious disease was finally brought in by the Notification of Diseases Acts of 1889 and 1890.

In 1891 there was a pandemic of influenza. This was its first major appearance for many years and the epidemic was severe; in Burnley there were 22 deaths. As Dr Dean later remarked " influenza only became deadly in 1891 ". Mackenzie, who had established in his practice the habit of taking notes on all the cases

he saw, observed the epidemic carefully and reported on a series of 250 patients seen during the epidemic.[15] He was able to give details not only of the symptomatology but also of the length of fever and the duration of the epidemic. This was no mean feat, for at the same time he was taking pulse tracings of many of his patients—tracings on smoked paper which had to be varnished for preservation. He was also seeing patients at some distance—there is mention in his notebook of one at Nelson and he saw others in consultation. Of the 239 uncomplicated cases, he found that in half (115) the fever lasted for two days and only in two did it persist for seven. In about one-third there was a mild bronchitis. Mackenzie, the general practitioner, had wide interests and he did not let his study of the pulse interfere with inquiries into other aspects of medicine. We know from his own statements that his main endeavour was to interpret symptoms and in particular the symptom pain. Two of

TABLE I

DURATION OF FEVER IN 239 UNCOMPLICATED CASES

1 day	*2 days*	*3 days*	*4 days*	*5 days*	*6 days*	*7 days*	*Total*
6	115	66	33	8	9	2	239

Reprinted from the *Medical Chronicle* 1891, **14**, 334.

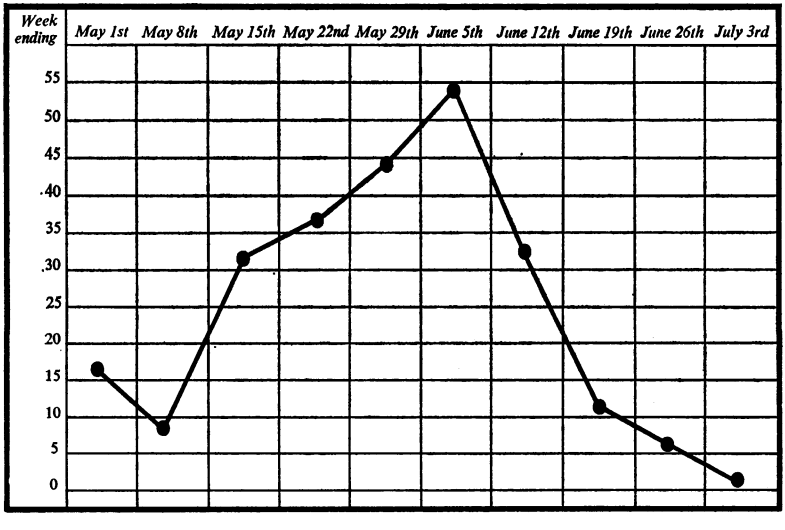


Figure 1

TABLE SHOWING THE PROGRESS OF THE EPIDEMIC

Reprinted from the *Medical Chronicle* 1891, **14**, 335

his earliest published papers were on herpes zoster. Whilst in Burnley, though Dr John Brown was the surgeon to the firm, Mackenzie himself often operated. In discussing pain he wrote:

" In operating on ovarian cysts for instance, if I found that the abdominal wall was not tender, nor the muscle rigid, then I knew I would meet with no troublesome adhesions. If, however, the abdominal wall was hard and tender, I would certainly meet with adhesions. But these observations were too few to enable me to speak with assurance on this point ".[16]

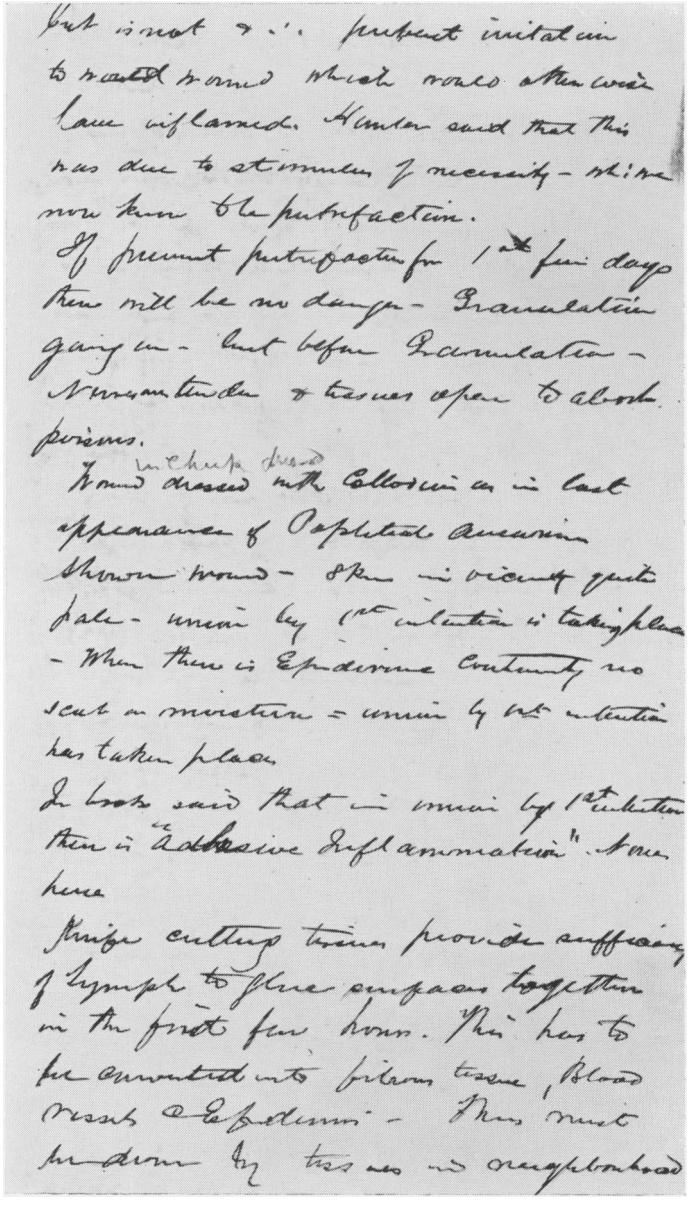
Medical science in the 1880's

So that we may understand the influences which were at play when Mackenzie started in practice we must look at medicine and medical practice at that time. In 1879 the medical world was agog with speculation. Every so often in medicine—and I suppose in other arts and sciences—there is a sudden flowering; epoch making discoveries in one field seem to stimulate into fresh activities all other branches of knowledge. We are today passing through one of those phases when the speed of change is so revolutionary, so breath-taking, that the older amongst us find ourselves struggling and floundering as we try to grasp wholly new concepts. And these advances are making their impact felt on all the other specialties so that we find our younger colleagues speaking in a different language to our own. So must Dr Briggs have felt when young Mackenzie joined him in his Burnley practice.

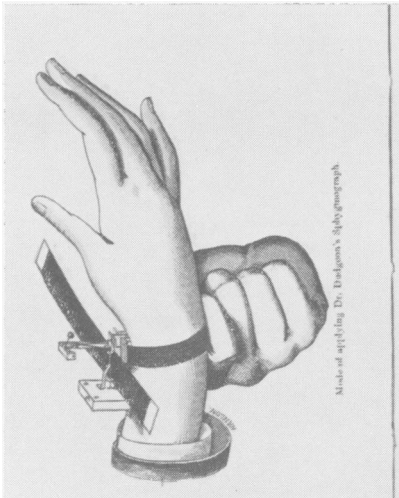
Sir Henry Acland, who became a medical student only a few years before Henry Briggs, wrote,[17] "the ophthalmoscope, the laryngoscope and sphygmograph have been invented; antiseptic surgery, and the employment of chloroform, and of hypodermic treatment have come into existence; bacteriology has been made a matter of serious study. Preventive medicine has reached a reality and skilled nursing a profession ". The era into which Mackenzie was entering has been called ' the age of the laboratory '.

When the British Medical Association met in Cambridge in 1880 this expectation of new wonders was reflected in its proceedings. Annual meetings of the association were then something of a major event; at these gatherings the medical and surgical giants of the day used to announce their latest discoveries and air their most recent theories. Amongst those who were present and spoke were Sir Henry Acland, Spencer Wells, Marion Sims and Joseph Lister.

Professor George Murray Humphrey (1820-1896) devoted a great part of his presidential address to the subject of collective investigations, and appealed for greater attention to be given to this subject by general practitioners.[18] During the next five years, the British Medical Association was very active in setting up collective investigations into many diseases. Reports were issued on pneumonia, diphtheria, cholera and acute rheumatism. To record the lives of



Page from James Mackenzie's notes on Joseph Lister's lectures on clinical surgery. Wellcome MS. No. 3229



Model of applying Dr. Dudgeon's Sphygmograph.

THE

SPHYGMOGRAPH:

ITS HISTORY AND USE AS AN AID TO DIAGNOSIS IN ORDINARY PRACTICE.

BY

R. E. DUDGEON, M.D.

PARIS – LONDON – MADRID

LONDON:
BAILLIÈRE, TINDALL, AND COX,
20, KING WILLIAM STREET, STRAND.
1882.

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Dudgeon's Sphygmograph

The Victoria Hospital, Burnley
From a brochure for an Extension Appeal (1911)

individuals, a *Life History Album* was published.[19] How much of all this activity influenced Mackenzie we do not know, but knowledge of these endeavours must have helped him when he came at last to St Andrews to found his Institute.

Clinical work in general practice

The clinical work of the general practitioner in 1879 was certainly more exciting and in some ways more exacting than it is today. The diseases which he daily met were more devastating, their management almost entirely empiric and their outcome more often mortal. The years that Mackenzie spent in Burnley saw many great changes but the science of medical treatment remained much the same. Hospitals were for the poor, the needy and the homeless. There were few specialized hospitals in the provinces but in most large towns general hospitals had been established for more than 100 years. Poor Law hospitals attached to the workhouses had become usual in most unions.

In the last quarter of the nineteenth century there was great interest in the design of hospital buildings; on the medical side this was stimulated by the work of Florence Nightingale on her return from the Crimea; by the terrible mortality from hospital gangrene which would occur in even the best managed hospitals; and by Albert Napper, the family doctor who showed that it was possible to provide cottage hospitals for even the smallest villages. The continued growth of industry, with its need for labour concentrated near the factories, caused great overcrowding and made it increasingly necessary to provide places where the sick could be nursed back to health. The improvement in nursing; the adoption of Lister's antiseptic and aseptic techniques made hospitals safer. Large wards for economy and ease of nursing were still popular but considerable space was now left between the beds and more attention was given to ventilation. Thus arose the pavilion type of hospital, examples of which were St Thomas's and the Edinburgh Royal Infirmary. A variant of the pavilion was the circular ward plan proposed in 1878 by John Marshall, professor of surgery at University College Hospital.[20] It is tempting to believe that it was through the influence of the old student of University College, Henry Briggs, that the circular ward plan was adopted for the Burnley hospital, the foundation stone of which was laid in 1884 and which received its first patients in 1886.[21] Mackenzie was one of the original members of the staff and remained an honorary physician until 1901 and an honorary consulting physician until his death in 1925.

Hospitals, however, were for the treatment of those who could not be nursed or could not afford to be nursed at home. The general

practitioner, the physician and the surgeon expected to treat the great majority of their patients in their homes. If surgical intervention was necessary this was done at home.

The nineteenth century doctor had few aids to diagnosis and most of these were imperfect. He would be armed with a monaural stethoscope of wood—possibly jointed or divisible into two parts for ease of transport and capable of being hidden in the tall hat so fashionable during that period. The first binaural stethoscope had been introduced in 1855 but was by no means popular. The diaphragm was introduced by Bowles in 1894. Practical methods of reading the blood pressure were described by Von Bosch in 1881 and the following years, leading to the introduction of the aneroid barometer by Potain and the mercury column sphygmomanometer by Riva Rocci in 1896.[22]

Conditions in practice

It is difficult to picture the life of a general practitioner in 1879. Entrance to practice was by assistantship with a view to partnership and ultimate succession. Partnerships not entered into with a view to succession in the foreseeable future were still rare though with the abolition of apprenticeship they were becoming commoner. It was still possible to employ unqualified assistants. These were not always men who had failed to qualify; some were youths who had never studied medicine and who never intended to.

In 1884 Alfred Cox, later secretary to the British Medical Association, became an unqualified assistant in Carlisle to a principal who announced his fees in a handbill—a shilling a consultation with medicine, 1s. 6d. a visit and 10s. a confinement—they did between 250 and 300 confinements a year. Cox wrote

" Finding I was keen and adaptable he (his principal) put me on to a textbook of midwifery, gave me some dissertations on the subject and took me to a few cases. Then he sent me out alone."[23]

Gunn of Peebles experience was similar. He went as a locum from Edinburgh before he had passed his second professional—

"Resplendent in the hat and surtout, but very homesick and nervous withal." He had never even travelled before, "yet now I was on my way to England, alone and inexperienced . . . to live and act as the sole doctor in a lonely district of Northumberland, miles away from any other practitioner". His sole obstetric equipment was Swayne's *Maxims in Midwifery*.

When in 1891 the employment of unqualified assistants was abolished

" There were hundreds of dispenser-assistants all over the country and many were grossly exploited, especially by men with branch practices—mostly in colliery districts. Some of them had grown old and hopeless, many were married and their lot when they were disbanded was a very hard one".[23]

In the 1870's there were too many practitioners and, consequently,

TABLE II

TARIFF OF MEDICAL FEES

Ex or inclusive of medicine, according to class and nature of case

A—General practitioners	*Class III* *£15 to £25	*Class II* £25 to £50	*Class I* £50 to £100 *and upwards*
1. Ordinary visit ..	2/6 to 5/0	3/6 to 7/6	5/0 to 10/6
2. Special visit	A visit and a half		
3. Night visit	5/0 to 10/6	7/6 to 21/0	10/6 to 21/0
4. Night-charge of and sitting up with patient Exclusive of mileage	21/0 to 42/0	21/0 to 63/0	42/0 to 63/0
5. Sleeping in the house by special request ..	10/6 to 21/0	21/0 to 31/6	21/0 to 42/0
6. Mileage beyond one mile from home ..	1/0 to 1/6	1/6 to 2/0	1/6 to 2/6
7. Detention per half-hour	2/6 to 5/0	3/6 to 7/6	5/0 to 10/6
8. Advice at practitioner's house.. ..	2/6 to 5/0	3/6 to 7/6	5/0 to 10/6
9. Letters of advice, or prescription	5/0 to 10/6	7/6 to 10/6	10/6 to 21/0
10. Consultations ..	Refer to explanatory notes		
11. Attendance on servants	2/6 to 3/6	3/6 to 5/0	
12. Two or more patients in the same house ..	Refer to explanatory notes		
13. Midwifery—			
Ordinary case of ..	21/0 to 42/0	21/0 to 63/0	42/0 to 105/0
Difficult case of ..	A fee and a half		and upwards
The administration of chloroform	10/6 to 21/0	21/0 to 31/6	21/0 to 42/0
The application of forceps	An extra half-fee		
The operation of turning	An extra half-fee		
The operation of embryotomy ..	An extra full fee		
The caesarean operation	210/0 to 315/0	210/0 to 420/0	315/0 to 630/0
14. Miscarriages	Refer to explanatory notes		
15. Vaccination	5/0 to 7/6	5/0 to 10/6	7/6 to 21/0
16. Certificates of health, etc.	Refer to explanatory notes		
17. Medicines repeated	Refer to explanatory notes		
18. Ordinary testing of urine	3/6 to 10/6	5/0 to 10/6	7/6 to 21/0
B—Consultants	*Class III*	*Class II*	*Class I*
1. Advice or visit, or letter of advice ..	†21/0	21/0 to 42/0	21/0 to 42/0
2. Mileage, exclusive of fee	Refer to explanatory notes		

*The rent being taken as an average but not absolute test of the income.
†Medical loyalty

Reprinted from Styraos, *The Young Physician*

competition was keen, fees low, jealousy and ill-feeling very common and discontent rife. Isaac Ashe[24] in suggesting that the only remedy was to limit the number of students qualifying, remarked that this measure might be considered as "trades-unionism pure and simple" and said:

> " It is. And nothing but trades-unionism will do these days. Nothing else will put us before the public in the position of partners to a contract for our services, instead of suppliants for employment at any terms."

Mercifully his plea has gained little support these 90 years.

The ' average ' general practitioner in Mackenzie's day earned his living from three main sources; from his private practice, from his clubs, and from his poor law appointments. His major source of income was his private practice. This consisted of the more wealthy of his patients, the gentry, the yeomen farmers and the better-off tradesmen. Though many of the smaller tradesmen and factory owners were well able to pay, they often managed to get themselves accepted into one of the clubs. The fees that a general practitioner could ask for and expect to receive varied according to the station of the patient, the rent taken as an average, but not an absolute test, of the fee to be charged. Visits would vary from 2s. 6d. to 10s. 6d. with extra for special services. Table II[25] shows the kind of demands which might be made. Thus " to take night charge of and sit up with a patient ", the fee might be from one to three guineas. There was always an understanding—not expressed in words—that the fees for the rich helped to pay for the poor; and so often the fees were not paid. On Hogmanay 1894, Clement Gunn[26] noted in his diary " My bad debts during the past year or two have amounted to 40 per cent ". " How ", writes an anonymous doctor[27] in 1904—

> " can medical men do justice to cases of serious disease when their fee is insufficient.... A medical man should not be allowed to sell three bottles of medicine for a shilling, as many of them find themselves constrained to do in our slums, or undertake to visit a patient at the latter's house and provide medicine for something under a shilling."

The practice of dispensing in towns was beginning to be frowned upon by such men as Isaac Ashe, and even Mackenzie himself considered the dispensing of medicines to be old-fashioned.

The tiresome business of posting up—that is transferring entries from the day book to the ledger, occupied much time—in the old days this had been the work of the apprentice. When the unqualified assistant was made illegal his place was taken, only slowly, by the dispenser.

Lawson Tait showed that the average income of medical men was £200 per annum.[28] Even with the changes in money values this is surely a pittance and the profession's resistance to Lloyd George's National Health Insurance Act quickly petered out when the pro-

fession found itself better off than it had ever been before.

Clubs

It was out of the club system that the panel doctor was born. Friendly societies, burial clubs and many other insurance schemes had been in existence for many years. By the time that Mackenzie started in practice they had become a power to be reckoned with. In 1874 there were 26,087 societies with 3,404,187 members.[29] The objects of friendly societies were wholly good. There was no unemployment benefit, no sick pay, no pensions. The only relief from distress was that of the Poor Law and the fear of being sent into the workhouse was very real, a fear which lingered long after the 1911 Act and indeed well into the 1950's. It was not until the early years of the nineteenth century that friendly societies began to employ medical men to care for their members in sickness. The doctor contracted with the local branch—lodge, tent, court or division—to care for the family for a sum which included medicine but usually excluded confinements. The fee per family varied but might be as low as 2s. 6d. per annum including medicine and the usual fee was 4s. 0d. (In Australia the fee was 25s. per annum.) Yet the doctors were unable to raise their fees and seemed to be at the mercy of the club secretaries. The chief reason for this was that if one doctor refused there were always others round the corner willing to take on the club. In many towns, the clubs combined to appoint a medical officer of their own choosing, in some they founded and ran a dispensary and appointed a medical officer at a fixed salary. Conditions had become so bad that in some places clubs were run by laymen as a business; the organizer collecting the money, appointing his medical officers and reaping his reward. Another type was the slate club run by publicans amongst their clientele. These were annual clubs, any profit left over at the end of the year being distributed to members as a Christmas bonus. Clubs of this kind were outside the jurisdiction of the Government. The colliery club was yet another variant; in this the doctor was paid by a deduction from the man's wages made at the colliery head. In 1891, in Northumberland, this was sixpence a fortnight which covered all medical attention on the family.[30] So many complaints were heard about medical clubs that in 1895 the editor of the *Lancet* appointed a 'commissioner' to visit towns and practices throughout the country to find out for himself how bad things really were. These reports appeared in the pages of the *Lancet* over the years 1895–1896 and were reprinted in a paperback entitled *The Battle of the Clubs*.[31] The inquiry showed that in many places there was lack of unity in the profession but where unity was obtained there was great improvement in conditions. However, the next 15 years did not see any improvement in professional unity and

much of the suspicion aroused by the National Health Insurance Bill of Lloyd George was due to the fear of the friendly societies with whose help the scheme was to be operated. Friendly society sick clubs and private clubs run by the doctors themselves for the care of the dependents of the ' insured population ' persisted until 1948.

The Poor Law

The new Poor Law of 1834 has been described as " probably a necessary measure; but it was suddenly and frightfully harsh ".[32] There were in 1879 some 4,000 medical officers looking after a total of 720,000 paupers, about 3 per cent of the total population of 24,420,000.[33] The pauper population in Mackenzie's time was divided into able-bodied—those capable of work whom we now class as the unemployed, and the sick and infirm. The percentage of ' able-bodied paupers ' was low indeed (96,017) and had been decreasing of recent years.

When a pauper was taken ill he had to obtain from the relieving officer an order for medical treatment before he could apply to the medical officer for help. If this was not done the medical officer was in danger of having his fees refused. For the patient or his relative this often meant a journey of eight or nine miles, for there were seldom more than two relieving officers to each union Nearly every union had its workhouse; these are to be seen today, memorials to the parsimony and insensitivity of our Victorian ancestors. Red brick or grey stone buildings with small high windows set around a yard, seldom paved and usually of rubble, in which no vegetation grew; in these the sick poor were nursed. They were not really hospitals, though each workhouse had its medical officer as well as its matron and master. It was convenient and usual that these dignitaries should be husband and wife and in them was vested the whole power and authority of the house,—a power far greater than that of the medical officer. The whole Poor Law system of medical relief was riddled with abuses. The guardians were often illiterate and harsh and were drawn from the small tradesmen and farmer classes. Their officers were not unnaturally of the same character. Dr Brown's wife often visited the Burnley workhouse.[34] Her memoirs give a few peeps inside the walls of the infirmary. When in 1894 women became eligible as guardians of the poor, she was nominated by the Women's Co-operative Guild. Her nomination was not popular, the existing guardians were old-fashioned and not very sympathetic. They complained that if a woman was elected they would have to watch their language. She found conditions in the workhouse to be even more deplorable than she expected and that the sick wards were no better managed. There were no trained

nurses and all the work of the infirmary was provided by paupers. In the nursery she found a girl of 14, slowly dying of consumption, sitting up in bed sewing shrouds. During the seven years that Mrs Brown was a guardian a new hospital was built, well equipped and staffed with a matron and trained nurses.

The Poor Law medical officers were appointed and paid by the guardians: the rates of pay varied but were always very meagre. The medical officer to the workhouse might receive £80 per year; the district officer's remuneration has been worked out at a figure ranging from 23s. 0d. to as little as 5s. 0d. for the care of one sick pauper a year. Out of this he would have to provide medicines.

The doctor's staff and equipment

What help had the doctor in the care of his patients and the running of his practice? It was usual to live above the surgery and the doctor's house was usually large. His family would contain several domestic servants and there would be a surgery boy, perhaps a dispenser, a groom and, if he were long established, a coachman. In the Burnley practice there was a dispenser who had been there since 1870. Mackenzie mentions that Semmelweiss' great discovery had not been utilized when he started practice and that he had ample opportunity to observe puerperal infection. Some time after he had adopted the thorough disinfection of his hands his dispenser remarked to him: " What a curious change has come over your midwifery cases. In bygone years we were never without serious cases, usually two or three with white legs, and every now and again a death. My first wife died in her first confinement. Now you never have any white legs, and no deaths ". Strange that Mackenzie the pupil of Lister should not have adopted disinfection in midwifery until he heard of the work of Semmelweiss.

When young in practice the general practitioner would walk to visit his patients, later acquire a horse, then a gig or trap and only when the joints began to stiffen, a coach or brougham. In the country, where the roads were mostly tracks, wheeled transport was out of the question. It was round about 1900 that the motor car first made its appearance as a means of transport, although it was still painfully slow, very unreliable and its usefulness limited by the state of the roads.

The role of the doctor's wife was somewhat different to that of her counterpart of today. Even in the poorest practices she could expect domestic help. She did not have to be ' at the end of the telephone '. Calls would arrive by messenger on foot, by horse and later by bicycle. The craze for bicycling did not begin until the 1890's and it was considered more of a toy than a useful means of propulsion, though some doctors adopted it as an easy method of

getting round their town patients. But if the doctor's lady was not tied to the house she would probably have other chores to perform. Helping with the dispensary or posting up the books, might fall her lot. There might be an assistant living in, and the doctor might augment his income by receiving patients into the family, often psychotics, or mentally deficient individuals. All this meant hard work.

There was little in the way of trained nurses. The attitude of the profession was summed up in an annotation in the *Lancet* in 1880.[35]

" Nursing is not a craft; still less can it be regarded as a profession. There are specialties in cooking and other departments of domestic work and there may therefore be professed cooks, and waiters and housemaids and washerwomen; but there ought to be no specialty in nursing, and there can be nothing professional in the work . . . The ' trained nurse '—that is a woman trained at nursing as a specialty is an anomaly ".

And the writer advises strongly against the employment of nursing helps or professional nurses. Nevertheless, the work of Elizabeth Fry and Florence Nightingale was beginning to be felt. William Rathbone had established a district nursing service which by 1865, had covered the whole of Liverpool. In 1874 the Metropolitan and National Nursing Association was formed and recommended more complete training ' on the Nightingale scheme ' for district nurses, but it was not until the foundation in 1887 of the Queen Victoria Jubilee Nursing Institute that an attempt was made to cover the whole country.[36] In 1893, Dr Gunn noted the arrival of a Queens Nurse in Peebles.

District nurses did not do midwifery. Until quite recently they were not required to have training in this. The care of the woman in labour was still mostly in the hands of the untrained ' mother's help ' type of woman. In 1869 a committee appointed by the Council of the Obstetrical Society of London to investigate the causes of infant mortality[37] was asked to report on two questions, (1) what proportion of births is attended by a medical man and a midwife and (2) are the midwives instructed. They reported that " among the poor population of the villages, a large proportion, varying from 30 to 90 per cent is attended by midwives." In the small non-manufacturing towns on the other hand attention by midwives prevails to a much less extent with a few exceptions. In the large provincial towns especially in large manufacturing towns, attendance by midwives among the labouring population is almost as large a proportion as in the agricultural village. Midwives were not instructed, indeed " from several districts the replies indicate not merely a want of any special education but gross incompetence and a complete inability to contend with any difficulty that may occur ". In 1872 the London Obstetrical Society began to examine midwives and award certificates and in 1881 the Midwives Institute was

founded with the object of raising the standard of midwifery, but it was not until the Midwives Act 1902 that the Central Midwives Board was set up.

* * *

Such was general practice as Mackenzie knew it. In the picture I have painted much of the canvas has been left blank and I have presented a patchwork only, not a composition—but general practice is like that, so varied, so engrossing in its many facets that it would take a week to do it justice.

When we consider the difficulties of practice 80 years ago we see the achievement of Mackenzie in its true perspective. Our difficulties, great as they sometimes are, pale into insignificance when compared with those he had to overcome. He was fortunate, no doubt, in the spirit of the age in which he lived, in his teachers and in his professional colleagues, but without his tremendous drive, his patience, his perseverance, his buoyant personality and his humility, he could not have succeeded.

Let me conclude with the words of Sir Thomas Lewis. " He saw, as few or none of his day saw, where clinical knowledge ends and ignorance begins; he was the first authority in clinical medicine on whose lips I frequently heard the words ' I do not know '."

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SEVENTH INTERNATIONAL CONGRESS OF MEDICAL PRACTICE

Resolution

The following resolution was adopted at the 7th International Congress of Medical Practice, which took place from September 16–19, 1965, at Salzburg (Austria), under participation of over 400 physicians from 20 different countries:

The general practitioner is the backbone of medical attendance provided to the population. His preservation is all the more important, the more medicine specializes. The general practitioner is conscious that his successful activity requires the trustful co-operation with all other physicians.

The 7th International Congress of Medical Practice at Salzburg notes that the number of general practitioners decreases steadily in all countries, which has reiteratedly led already to difficulties in medical attendance.

The Congress appeals to the responsible agencies in all national organizations to take steps with a view to forestalling the danger of deficient medical attendance of the population by general practitioners.