Admin-biog history
James Mackenzie (1853-1925) was born on April 1853 in Pickstonhill Farm, Scone, where his father was a tenant farmer and was the third child and second son. He attended the local school at Scone and he went to Perth Academy in 1865 but left after three years to serve an apprenticeship as a dispensing chemist at Reid & Donald chemists, George Street, Perth, for four years. After working as an assistant chemist in Glasgow for a year, he decided to study medicine. After some private tuition in Latin, he passed the university entrance examination and entered the medical school at Edinburgh University, qualifying M.B. & C.M. in 1878. He worked as a locum in a colliery practice at Spennymoor, County Durham from June of that year till November when his resident post at Edinburgh Royal infirmary became available. On completing his residency in 1879, he joined Dr. Briggs and Brown in general practice in Burnley, an industrial town in England.

He found himself in a very busy practice where the patients did not correspond to those in the teaching hospital or the textbooks. In Victorian England, infectious disease was rife, and in Burnley in 1879 there were 56 deaths from scarlet fever and the infant mortality was 205/1000 births. He saw 60 to 70 patients daily and attended an average of three deliveries a week but still he found time to complete his MD thesis on Hemi-paraplegia Spinalis in 1882.

In his spare time, he studied Greek and German, played golf and started to write a novel, which was concerned with the social deprivation prevalent at that time. In 1885, he was able to afford the time and the money for a holiday in America. The highlight of his visit was to Yellowstone Park. Two years later, he married Frances Jackson and honeymooned in Italy. He had two daughters Dorothy born in 1888 and Jean in 1893.
While engaged in this very busy practice, he made original observations and had over fifty papers published. Although many of his articles were on cardiology, he also wrote on many other topics particularly neurology and pain mechanisms. He was among the first to own a motorcar in Burnley and a photograph in one of his biographies shows him in this car with a driver.

In 1890 he made the seminal observation that the chambers of the heart could beat out of their correct order, when he discovered extra systoles. But it was not until the distinguished pharmacologist, Professor Cushny, demonstrated extra systoles experimentally in the mammalian heart that Mackenzie's findings were generally accepted. Before his discoveries were widely known, many people were made cardiac invalids by the anxiety of their doctors who, on discovering the irregularity due to extra systoles, confined the patient needlessly to bed or ordered them to curtail their activities.

By carefully following up his patients with extra systoles, Mackenzie showed their benign nature. At first he used a sphygmonograph for graphically recording a peripheral pulse. The tracings were made on a smoked drum which was then varnished to preserve the record, a very time consuming process. He then developed the polygraph, a portable clockwork, ink-writing instrument with two tambours with which he was able to record radial and jugular pulses simultaneously and to measure the atrioventricular interval. He used the polygraph to diagnose the various types of heart block. This work was all done in the course of the usual busy medical practice. At this time his knowledge of cardiology was growing very fast cardiac irregularities were regarded with concern by the profession and the laity, as none knew their significance.

In 1897 he noted that in a patient with mitral stenosis, the presystolic murmur disappeared with the onset of irregularity of the pulse but he also noted that the 'a' waves in the jugular venous pulse had also disappeared and concluded that the auricle was paralyzed, which functionally it was. This disordered irregularity described by Mackenzie was later called auricular fibrillation.

Another of his discoveries was the action of digitalis on conduction in the atrioventricular bundle, so slowing the ventricular response in atrial fibrillation. He also devised a safer and simpler regimen for prescribing digitalis.

He managed to find the time to do an immense amount of research together with a heavy workload of family practice, he had an enormous capacity for work and was driven by an intense desire to advance his understanding of disease. Mackenzie was expert with the polygraph and painstaking in storing and interpreting those records. He filed his notes and tracings for further reference and as illustrations in his textbooks. At the age of 49, the first of his books, "The Study of the Pulse" [1902] was published after twenty-three years in general practice.

By this time he had become the world clinical authority on heart disease. His publications attracted the attention of many famous medical personages and including Weckenbach [from 1902] and Sir Arthur Keith in 1903. Mackenzie sent the hearts of patients obtained at autopsy to Keith who studied the pathology particularly the conducting system.

In 1906 he attended the BMA meeting in Toronto and the GP from Burnley became
engaged in a lively debate with Dr. Morrow, professor of physiology at McGill University and it appears Mackenzie got the best of the argument. The following year saw the formation of The Association of Physicians of Great Britain and Ireland, the membership of which was limited to 200 hospital physicians and lectures in clinical medicine. Mackenzie, although a general practitioner, was elected and opened the discussion on the heart at the first meeting.

He left Burnley for London and set up as a consultant in November 1907. He was invited to join the staff of the West End Hospital for nervous disease under Sir James Purves-Stewart and was appointed to the staff of Mount Vernon Hospital Hampstead. His second book, "Diseases of the Heart", was published in 1908. The following year, he rented consulting rooms in Harley Street and in a very short time, was very busy with private patients. Although he was he was elected FRCP in 1909 but his main objective, a place on the consultant staff of the London Hospital eluded him although he was appointed lecturer in cardiac research, in 1911 to that hospital and was allowed the use of six beds.

Mackenzie's third textbook, "Symptoms and their Interpretation", was published in 1909 and the following year he was made an LLD of Aberdeen University. More honours followed in 1911 when he delivered the Oliver Sharpey lecture on heart failure to the Royal College of Physicians and the Schorstein lectures on auricular fibrillation to the London Hospital. In 1913, he was appointed physician in charge of the new cardiac department at the London hospital and was involved in setting up the military cardiac department at Mount Vernon hospital. In his eleven years in private consultant medicine, he did not charge excessive fees but still earned a considerable amount of money.

In 1915, he was elected a Fellow of the Royal Society; a knighthood followed later that year. The following year he published "Principles of Diagnosis and Treatment in Heart Infections". To all intents, he had made it in London, become a consultant to the prestigious London Hospital, and had done well financially. So, it seems strange that two years later, at the age of sixty-four, he decided to leave London and move to St. Andrews to set up an institute for research in general practice.

By October 1919, he had established his research institute in St. Andrews and managed to involve all the general practitioners in the town in his project. He also found the time to publish another work "The Future of Medicine". The various programmes considered at the institute included the investigation of pain, of glandular enlargement, disease of children and consumption, a somewhat daunting task for five GPs. He was very keen to get the general practitioner involved in keeping good records and in the epidemiology of the maladies occurring in practice. He was probably one of the first to think of epidemiology in terms of non-infectious diseases. In 1920 he was appointed Honorary Physician to the King and he put forward proposals for a postgraduate school for training panel doctors.

In 1923, his large output of textbooks was expanded with the two publications, "Heart Disease in Pregnancy" and "Angina Pectoris". The achievements of the institute were modest and it did not last long after his death but he did draw attention to the importance of family doctors and their need for special training. It is worth noting that three university chairs of general practice in Britain are named in his honour.

Mackenzie had suffered from angina pectoris for many years and died on a visit to
London in January 1925. A postmortem examination was carried out by his former assistant, Sir John Parkinson who on Mackenzie's prior instructions, had his heart taken to the anatomy department of St. Andrews University.

**Collection Description**

Correspondence, publications, patient records, artifacts, photographs and research.

1. **CERTIFICATES** of degrees, qualifications, society membership, 1878-1913.


3. **PATIENT REGISTERS**: Case notes with polygraph tracings, 1890-1907; Appointment books, 1916-1918.


5. **MANUSCRIPTS** and **PUBLICATIONS**: books and articles written and/or by Mackenzie, 1888-1926.

6. **CORRESPONDENCE** [collected and arranged by Professor Mair in connection with his biography of Mackenzie], including original and copy correspondence with Mackenzie, 1853-1925. Correspondents include Sir Clifford Allbutt; Sir W Morley Fletcher; Sir William Tennant Gairdner; Dr John Hay; Professor Matthew Hay; Sir Henry Head; Joseph Lister; Sir Berkeley Moynihan; Sir James Orr; Sir John Parkinson; Sir Humphrey Rolleston; Dr Gordon Saunders; Sir Charles Sherrington and Sir Almroth Wright; family correspondence with Lady Mackenzie after her husband's death. 1925; correspondence between acquaintances of Mackenzie and Professor Mair for the purposes of his biography, 1960s; correspondence between Professor Mair and Mackenzie Medical Centre, Burnley, 1960-1968. Correspondence between Professor Mair and Dorothy Mackenzie, 1960s.

7. **OTHER BIOGRAPHICAL MATERIAL**: Miscellaneous letters, receipts, notebooks, calling cards; press cuttings, including obituaries and programme for unveiling of memorial in Burnley, 1931; Family Bible, 1813, of the Jackson family [Lady Mackenzie's family] with lists of births, 1820-1881.


**Name of creator**

Sir James Mackenzie (1853-1925) Alex Mair [biographer], Anne Darlington [Curator RCGP]

**Associated material**

GB/NNAF/P18522 Mackenzie, Sir James (1853-1925) Knight Physician
**Publication Note**

Sir James Mackenzie The Beloved Physician by R McNair Wilson (1926); Sir James Mackenzie MD 1853-1925 General Practitioner by Alex Mair (RCGP, London, 1973 and 1986). Since 1955 there has been an annual James Mackenzie lecture held at the Royal College of General Practitioners - these are published in the College's journal BJGP. See RCGP Fellowship and Awards papers [GB 2134 ACE E].

**Archival history**

Found in RCGP archives in 1997 probably given by Professor Mair, biographer of Mackenzie. Some material given by Lord Almuree 1966.

**Language**

English

**Accruals**

None expected

**Arrangement**

By subject/type

**Level of Description**

Fonds

**Access**

Access is at the discretion of the Royal College of General Practitioners. Requests for access should be made in writing to The Archivist, Royal College of General Practitioners, 14 Princes Gate, Hyde Park, London SW7 1PU.

**Access Conditions**

Some material very fragile

**Rules or Conventions**

Rules or conventions: National Council on Archives, Rules for the Construction of Personal, Place and Corporate Names, 1997; ISAD(G), Second Edition, 2000

**Repro conditions**

Some material very fragile

**Extent**

11 boxes

**Note**

Also includes material created after Mackenzie's death by his biographer Alex Mair. Collection previously known as PP/MAC

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CJ