VII

THE INFIRMARY ON THE FORTH, 1753–1906

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THE BEGINNING

McKENZIE (1827) in his description of Newcastle, begins his chapter on Medical Establishments, "Infirmaries stand at the head of Public Charities that abound in England; and certainly few have been so extensively useful as this Establishment". He was, of course, referring to the Newcastle Infirmary on the Forth immediately west of where the Central Station would stand 22 years later, and then almost at the mid-point of its time on that site. For in October 1753 the Infirmary had moved from its first temporary home in Gallowgate and would remain on the Forth until the last patient left for the new Royal Victoria Infirmary on the Leazes on the 17th September 1906.[1]

The founding of the Infirmary and the story of the work accomplished in that house in Gallowgate has already been vividly recorded in *Archaeologia Aeliana* by Sir William Hume[2] (1954). My purpose is to continue that story over the 153 years of work on the Forth and to place the Institution within the context of a rapidly changing society.

The idea of a hospital was first brought before the public when a letter, signed only with the initials "BK", appeared in the *Newcastle Courant* for 28th December–5th January 1751. The writer, thought to be Richard Lambert,[3] a young surgeon, made a strong appeal for a hospital to care for the Sick and Lame Poor, "For where are there so great numbers of Poor Employed or their employment more dangerous than in and about this neighbourhood—why not then follow the examples set us lately by Northampton, Worcester, Norwich and other places?". The letter was both a clear indication of increasing industrial and manufacturing activities and a call to civic pride to emulate the many other cities where voluntary hospitals had been established for those people who, although not paupers, could not afford medical care in their own homes.

The proposal caught on immediately, public subscription lists were opened, and wide support was forthcoming from Newcastle, Northumberland and Durham, so that by March a meeting of subscribers was able to take two decisions. First to rent a house where patients could be treated until a proper building could be erected; second to build a permanent hospital and to apply to the City Corporation for a site. Within a week a suitable house in Gallowgate was obtained and Medical and other Staff were appointed at the beginning of April. By June the City Corporation

had given £100, promised a similar subscription annually, and agreed to make available a site on the Forth Banks at a rent of 2/6 per annum.

No time was lost. The first patients were admitted to Gallowgate on 23rd May and the foundation stone of a hospital to provide 90 beds was laid in September. Two years later the building was finished, having cost £3,697 including all bedding, linen and furniture. Staff were transferred from Gallowgate, and the first patients admitted on 8th October 1753. (Hume, 1906).

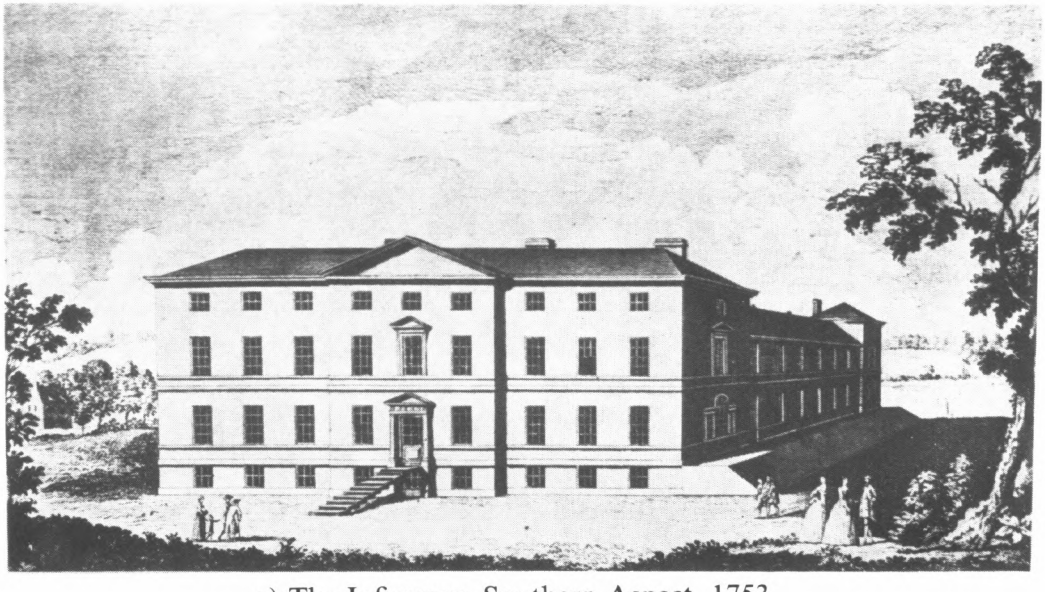
THE FORTH 1753–1906

The building, of stone ashlar, comprised a main block of three floors facing South and a wing of two floors facing East. The rooms on the ground floor facing South contained a Chapel, a Board Room, a room where the physicians and surgeons examined prospective patients, and the Matron's parlour. On the second floor, emphasising that the Infirmary was not simply for Newcastle, were three wards for men, named The Durham, The Newcastle and The Northumberland, and a back room called the Sydenham. The Operating Theatre was in the attic floor and behind it were two back wards, the Cheselden and Harvey, like Sydenham commemorating famous medical personalities.

The first floor of the East wing had two wards for men, one of sixteen beds called the "BK" to recall the writer of the first letter in the *Courant* and, north of it, a small ward of six beds rather ominously named "Job". Above, on the second floor, were three wards for women—the "Butler", named after the Lord Bishop of Durham, Joseph Butler, a generous subscriber who died whilst the Infirmary was being built, and the Magdalen and Lazarette, names perhaps rather unfortunately chosen. Behind the main buildings stood the bakery and the brew house and, at a little remove, the burial ground. This accommodation remained unchanged for fifty years until the extension of 1803 heralded those of 1830, 1855 and 1885, as the Governors laboured to meet ever-increasing demands for accommodation whilst the population of Newcastle and North Tyneside increased sixfold from the 60,000 of 1801 (Rowe 1981).

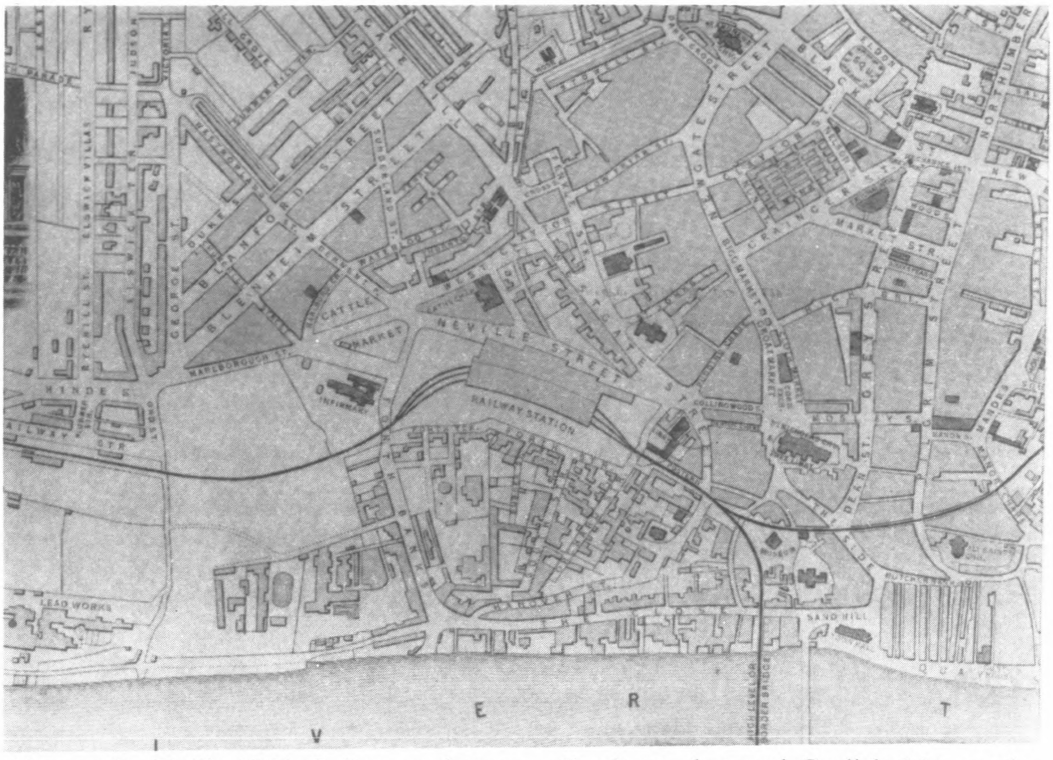
That increase in population was both the result and the cause of increasing industrial activity, initially based upon the export of coal but seen also in glass and chemical works, then engineering, ship building and armaments and all their subsidiary trades. River improvement brought a great increase in shipping, so that at the end of the 19th century the Tyne was second only to the Ports of London and Liverpool. These manufactures and trades brought not only prosperity to many but had a toll in industrial and other accidents, trauma and ill health. Thus the work of the Infirmary must always be considered in relation to the ever changing background of increasing population from 1750 and from 1837 the beginning of measures to improve public health (McCord, 1981).

This change was certainly manifest in the physical surroundings of the Infirmary as the Forth and its rural amenities became engulfed in the expanding city, the developing railway network, the cattle market and factories. This process can be



a) The Infirmary, Southern Aspect, 1753.

b) Beilby, plan of Newcastle, 1788. Infirmary just South of SW angle of Forth.



a) Newcastle, Tallis 1851. Infirmary between Cattle market and Carlisle-Newcastle Railway.

b) Newcastle, area of the Forth, Ordnance Survey 1894. Infirmary surrounded.

followed best on maps of Newcastle published between 1788 and 1894. The first, by Beilby (1788), shows the Infirmary and the Forth Building set in gardens and fields outside the city wall, the Infirmary lying just to the south-west of the Forth and bounded on its west by the Skinner Burn. It could be approached by paths from the West Gate, from beside the Spital Tower or by climbing the steep rise from the river up what was later known as Forth Banks; but until 1811 many people must have used the postern gate just south of the Pink Tower which opened to the tree-lined lane leading to Forth House and its bowling green. At that date the City walls were still intact. Sixty years later (Tallis, 1851) all below the present West Walls had disappeared, Forth House itself had gone and just south of the Infirmary the railway from Carlisle swept toward the newly opened Central Station. South of the Station and the railway the banks of the river were now occupied by houses and works, while to the north the Cattle Market filled the ground between the Infirmary and the houses of the Waterloo Street and Blenheim Street areas. The country atmosphere was gone. Indeed in 1900, a senior surgeon telling of conditions in 1870 when he first joined the hospital, wrote "the piece of ground on the west side of the Forth Banks Road now occupied by the North Eastern Railway Company's building was then waste or worse for it was partly occupied by shanties in which were tied up, on every Monday afternoon and all Monday night, the dogs of drovers frequenting the Tuesday Cattle Market. During the night these tethered dogs barked more or less continuously to the great disturbance of the Infirmary patients and the Resident Staff. On the east side of the building, close up to the Infirmary wall, for some years Hoppings were held and for the after part of the days and for the greater part of the nights during which vulgar shows and noisy shuggy-shows were in evidence, the noise was deafening. Many a poor mangled wretch as he tossed upon his bed, restless and in pain, seeking sleep in vain, soundly rated the authorities who so thoughtlessly allowed the cruel nuisance to continue." (Page[4] 1900). Finally, the 1894 Ordnance Survey Map shows an enlarged Infirmary quite surrounded, the Cattle Market now extended to the South-West as well as the North, and to the East and South-East many railway lines and extensive Goods yards. Contemporary photographs reveal the smog-filled atmosphere and the accuracy of Collingwood Bruce who wrote in 1863, "No one entering Newcastle or the neighbourhood can do otherwise than bewail the condition of those who are doomed to live under that canopy of smoke."

THE INFIRMARY, THE PARTICIPANTS

Governors and House Committee

Buildings and surroundings are important but the essence of a hospital is the interaction between three groups of people. Those who govern and manage; the medical, nursing and other staff who serve, and those who seek care, the patients. This determines the effectiveness of the Institution. The monastic provision of hospitals and infirmaries had disappeared at the time of Henry VIII, and apart from the five chartered hospitals refounded in London in response to the pleas of the

a) The Infirmary 1895. The new Dobson Wing on left. The original 1753 building on right and between the 1803 extension.

b) The last patient leaves the Forth for the Royal Victoria Infirmary on the Leazes, 17th September 1906.

citizens, nothing took their place for nearly two hundred years when hospitals dependent upon public donations began to appear. In London the Westminster Hospital was first, in 1720, and in the provinces, the Winchester County Hospital and Bristol in 1736 and 1737 respectively; twenty-six other voluntary hospitals, of which Newcastle was the tenth, followed by the end of the century.

In all cases the Governors, i.e. the major benefactors or regular subscribers, formed the Governing body. In Newcastle a £20 donation or an annual subscription of two guineas, brought a Governorship and the right to attend and vote at the Quarterly Courts. Each hospital developed its own Statutes and Rules. These varied in detail from hospital to hospital but generally seem to have been designed to cover every aspect of the management of the hospital and conduct of the patients.

The Governors met as a body four times a year on the first Thursday in January, April, July, and October to discuss major matters of policy and finance and to appoint a House Committee for the next three months. It was this House Committee which was responsible for the detailed care and supervision of the Institution. Composed initially of thirty-six members drawn equally from Newcastle, Northumberland and Durham and later of four members from each area this Committee met each Thursday morning at 11.00 a.m. in the Infirmary. At each meeting a chairman was elected from the members present. Each week the committee received the reports of the Matron and, until 1804, the Apothecary, and thereafter the Resident Medical Officer. Each week also the House Committee heard the reports of the visitors of the previous week and appointed those for the next. Matters of finance were discussed, accounts scrutinized and, if necessary, reported to the next Governors' meeting and the two months book was examined. This book contained the names of any patients whose letters of Recommendation had expired. For a considerable time after the foundation of the Infirmary patients could, except after accidents, be admitted or discharged only on Thursdays when those discharged appeared before the House Committee to give thanks for the care they had received. They were then expected to attend their parish church on the next Sunday and give thanks there also. Patients complaints could be brought to the Committee either through the Visitors or the Officers and seem to have been numerous.

Since the Visitors changed weekly and the House Committee reported to the Governors only quarterly it is difficult to assess the quality of management the arrangement provided. Yet, though modified with time, and much later including representation from the Medical Staff, the House Committee remained the major channel of management until 1948 and the coming of the National Health Service.

Staff

The Medical Staff were appointed by the Court of Governors by election, each governor having a vote. Candidates were allowed to canvas and competition soon became intense as these Honorary positions came to have both social and medical value. Appointments were originally only for one year but were renewable. The first, made in April 1751 were of four physicians and two surgeons. Drs. Adam Askew,[5]

Cuthbert Lambert,[6] William Cooper,[7] Francis Johnson,[8] were the physicians and all except William Cooper, who died in 1758 following a fall from his horse, served for twenty years. The two surgeons were Mr. Samuel Hallowell[9] and Richard Lambert the "BK" of the letter to the *Courant*. Samuel Hallowell died in 1759 but Richard Lambert continued to serve the hospital until 1778. None received payment, all were subject to rules and had fixed times for attendances, and the surgeons were also liable to be called for attention to patients admitted after accidents or when necessary to see to the dressings of any patients. Two resident officials were appointed—a House Apothecary Mr. Henry Gibson who was to remain in the post for twenty-three years, and the Matron, Mrs. Dorothy Jackson; the former was paid £30 and the latter £10 annually. The Apothecary was responsible for drugs and making up prescriptions of the physicians but must have also been concerned with the day to day care of the medical patients and the general overseeing of the hospital. The Matron appeared to be more a housekeeper than a head of nursing, for she was also responsible for the domestic arrangements, for equipment and for food. Together they seem to have been responsible for discipline and indeed were not to be away from the hospital at the same time without special permission. Yet Anthony Taylor who succeeded Henry Gibson, also served for twenty-four years until in 1805 Frederick Glenton M.D.[10] the first House Surgeon was appointed. Then over the next sixty-five years one qualified medical officer was in residence, the periods in office varying from one to twenty years. Although only two surgeons had been appointed in 1751 it was found necessary to have two additional appointments, William Keenlyside[11] and Henry Gibson[12] seven years later. Thereafter the numbers of Honorary staff were not increased until assistant surgeons were appointed in 1869 and assistant physicians in 1897. Over the period 1751 to 1905, some thirty-seven physicians and forty-three surgeons served the Infirmary in Honorary capacities and of those nine physicians and the same number of surgeons died in office.

During that period the education and training and also the roles of medical practitioners underwent great changes. In the mid-18th century physicians were regarded, and certainly thought of themselves, as the most learned and socially superior class of practitioner. Apprenticeship was the usual entry to the practice of medicine and would remain a part of training for more than a century, but the physician would also have studied and taken his Doctorate of Medicine at a University. In England, Oxford and Cambridge were the only two universities, and most aspirants for the degree studied in Scotland, principally in Edinburgh or Glasgow, or went to Holland (e.g. Leyden) or Italy (e.g. Pisa). They practised internal medicine and in effect treated symptoms and complaints by giving advice and prescribing medicines which were then made up by apothecaries who charged for their dispensing services and drugs but were not legally allowed to give advice to patients or themselves to prescribe. Apothecaries were trained by apprenticeship, sometimes in a Society of Apothecaries, as in London, but in others in a Grocers or Spicers Company; in Newcastle local apprenticeships must have been possible, some seem to have been in the Merchant Venturers and others in the Plumbers, Glaziers and Pewterers with Painters, and there was an Apothecaries Close near

Spittle Close, Gallowgate, but in 1735 there seem to have been only three apothecaries registered. (Whittet, 1964).

Few Surgeons took a degree of Doctor of Medicine. The overwhelming majority were members of Surgeons or Barber-Surgeons Guilds and were admitted after five years apprenticeship with a practising surgeon. It is said that the early Physicians being monks and in the Church, were not allowed to draw blood so that when patients required bleeding, these procedures were carried out by Surgeons or Barbers. By 1750 Surgeons Guilds were practically separate from those of Barbers. Surgeons, in effect, looked after the outside of the body treating injuries, dislocations, fractures either simple or compound, for which amputation was the usual treatment as infection was almost certain to follow. Surgeons also operated on cysts or superficial tumours, opened abscesses, and treated ulcers and skin conditions. Stone in the bladder was then common, and some surgeons appeared to specialize in the operation of cutting for the stone. (Shaw, 1970). On the other hand surgeons were not legally permitted to prescribe internal medicines for their patients. But these rules, like those relating to apothecaries, were commonly ignored and surgeons did general practice as did apothecaries for the great mass of people. Thus, in Newcastle as in most other hospitals, the hospital staff were all in practice and potential rivals, for the idea of consultant physicians and surgeons who would see in consultation only such patients who had been referred by other doctors for a second opinion, was still a century away.

In their attendance at the Infirmary the physicians worked in pairs each visiting on their appointed day to interview and examine potential patients, and to decide whether they should be treated as in-patients or out-patients, or declared to be unsuitable. The surgeons attended in the same way, but were also expected to see any out-patients or, at other times, to deal with accidents of all descriptions.

Within the next hundred years the position changed completely. The College of Surgeons in London, founded in 1800, received the Royal Charter in 1824 and began to hold examinations for Membership. But nine years earlier the Apothecaries Act had made the Licence of the London Society of Apothecaries a requirement for practice in England. The examinations of both institutions were held in London, and candidates were required to submit the appropriate class certificates as evidence they had attended the necessary lecture courses. Both institutions recognized certain provincial medical schools including, after 1834, that of Newcastle, and the possession of the Certificate of Membership of the College of Surgeons (MRCS) and the Licence of the Society of Apothecaries (LSA) became the recognized qualifications for general practice and remained so until the new Universities initiated their own medical degrees in the second half of the 19th century. In 1858 the Medical Act was passed. This established the Medical Register and identified the bodies whose teaching or examinations would be recognized for the purpose of enrolment in the Medical Register without which it was not legal to practise medicine. During the same period the Royal Colleges of Surgeons and Physicians in London instituted examinations for those who wished to be recognized as Surgeons or Physicians whether or not they were in general practice. Thus, during the 150 years the Infirmary

was on the Forth, the practice of medicine was regulated, the avenues to qualification were defined and postgraduate study for specialization began, so that in Newcastle at the end of that period one physician, Sir George Hare Philipson[13] and one surgeon, Rutherford Morison,[14] were, outside the Infirmary, engaged in consulting practice as we know it today.

The Patients

The relationship of patients and the House Committee has already been mentioned in so far as it concerned admission and discharge. But patients as people, particularly in the early days, are much more difficult to identify. They did not write about their experiences nor were they written about as individuals, and were lost in the enumeration of the types of illnesses presented in the Annual Reports. The accommodation provided in the Infirmary was primarily for the "Sick and Lame Poor" of Newcastle, Northumberland and Durham, and remained so despite the opening of hospitals at Sunderland in 1794 and Durham in 1792. Thus on the one hand it was not intended for paupers, who should have received care under the Poor Law, nor on the other was it for those able to pay for medical care in their own homes. But it did include a wide range of persons and their dependents who had no financial reserves to meet ill health or adversity, or had exhausted those reserves. In fact, however, attendance at or admission to the hospital was determined by the possession and presentation of a "letter of Recommendation". These letters were given to subscribers in accordance with a definite tariff which varied from time to time, but was usually one in-patient or two out-patients for one or two guineas. If the patient was admitted the letter was valid for two months at the end of which time the patient might be discharged, whether or not he had recovered, unless a further letter could be obtained. The subscribers who held these letters could dispose of them as they wished and thus exert influence and patronage, for the physician or surgeon would not wish to antagonize the people upon whom the precarious finances of the hospital depended. Yet the system continued until 1888. The letter of recommendation could not be applicable to persons involved in accidents, and those suffering from acute injuries were treated or admitted as required, at any time. Yet certain groups of persons or conditions were excluded by the rules as unsuitable for admission. 'No woman big with child; no children under seven years of age (except when an important surgical operation is required); no person afflicted with insanity, labouring under the measles, smallpox or infectious fevers; afflicted with cancer not admitting of extirpation or labouring under scrophula of a high taint (unless some important operation is required); no person in the last stage of consumption, hectic fever or of dropsy; no person afflicted with palsy proceeding from a worn out constitution or from decay of old age and no person judged to be incurable, and in a dying state, can be admitted as in-patients on any account." (Clark,[15] 1802).

How far these rules were actually applied must be doubtful but it is interesting that "recommenders are requested, in doubtful cases to obtain information from medical men in their neighbourhood whether the disease be admissible, according

to the rules—by which means the fatigue and expense of an unnecessary journey to the Infirmary may be prevented." (Clark 1802).

The Infirmary did not appear to have any form of conveyance and patients must have found their own ways to the Forth. Most illustrations show some lame or crippled person on the road, and indeed many must have walked while others, after accidents, were trundled on handcarts. In the early years some may have been carried in carts, but the method of travel is nowhere recorded. Distance must have been a limiting factor, despite the claims that the Infirmary was for the two counties as well as for Newcastle. Out-patients coming for treatment from a distance more than ten miles were paid a shilling a week towards their expenses.

THE INFIRMARY AT WORK

Whatever the limiting factors to the origin and the type of patients, there is no doubt that over the 150 years the Governors had a constant struggle to finance and meet the need for more and more accommodation as the eligible population increased and the scope of treatment widened with the extension of medical knowledge, and finally with public expectation. The account of these years is therefore one of constant efforts to meet increasing demands without the assurance of adequate resources when all support came from private funds and depended upon the goodwill of the public and the unpaid services of the physicians and surgeons.

The period is best described in three epochs, each ending in major extensions; the first from opening until the great fever controversy and the extension begun in 1801, the second lasting until the building of the Dobson Wing in 1855, and the third until the final decision to move to the Leazes and the 17th September 1906 when the last patient left for the New Royal Victoria Infirmary.

First Period 1753–1803

The two years of work in Gallowgate had made the Infirmary known and it is evident that the New Infirmary was soon full of patients. At the beginning the financial position was good and the Quarterly Court was able to begin a capital investment fund which after ten years amounted to £7,000. But over the years the collection of annual subscriptions became more difficult, and revenue lagged, although many County families of both Northumberland and Durham were generous in their support.

Patients were plentiful, between five and six hundred were admitted each year, there being 80–100 in the hospital at any one time. On admission the only separation was between the sexes, for otherwise what we would now call medical and surgical patients were not separated. No medical reports are known for the early years on the Forth, but there was a report on the patients treated during the first year in Gallowgate (Hume, 1954) and there can have been little difference during the first years on the new site. In that report patients were listed under forty seven headings, some of which are:

Abscesses and Tumour	Palsy
Agues	Piles
Amputation	Rheumatism
Cancer	Scalded
Colic	Scurvy
Consumption	Stone and Gravel
Dislocations	Scrophulous
Fever	Ulcers
Fistula	Weakness extreme
Flux and Bloody Flux	Worms

This symptomatic classification does not give much information about underlying pathology, but it is known that acute and chronic infections like dysentery and tuberculosis were common; as were skin and nutritional defects, and rheumatism and rheumatic heart disease; that cancers and new growths must have become advanced, and that the number of accidents both industrial and domestic was increasing. About two hundred surgical operations were carried out annually, the most severe being those of amputation and cutting for the stone, the former being the recognized treatment for a compound fracture and sometimes required after extensive skin ulceration or following tuberculous disease of bone, while the latter was to cure or alleviate the severe pain and bleeding caused by stone in the bladder, then so common and crippling a condition.

The physicians prescribed for all the patients and the surgeons were required to consult with the physicians before operating unless following accident the condition of the casualty were such that life was threatened. This led to difficulties and by 1773 open quarrelling and a special Court of Governors was required to consider whether surgeons should be allowed to prescribe internal medicine for their own patients. Information regarding the practice had been obtained from other hospitals and apparently this had become customary, although it was against the strict Ruling. In a vote "Custom" had a narrow majority over "Rule" and henceforward surgeons prescribed for their own patients. (Hume, 1906).

It is very difficult to imagine the daily life in a ward. Only two nurses seem to have come to the Forth from Gallowgate, and although Matron was empowered to engage nurses there is no mention of them in the Annual Reports until 1865.

Not all the patients would have been confined to bed all the day. Those on their feet must have helped others, as would visitors, but the arrangements for the distribution of food and the medicines are by no means clear. If each ward had a nurse, she would probably cook her meals and sleep either on the ward or in an adjoining room. Nursing at that time and for nearly a hundred years to come was an occupation followed by women of little education or means who were prepared to accept the life for shelter, food and little salary.

The weekly visits of the members of the House Committee brought frequent complaints and serious matters concerning both patients and staff. Charges of

drunkenness, smoking and disorderly behaviour were not infrequent, and patients complained about the meat in the broth and the thinness of the beer, both of which were prepared on the hospital premises. Indeed towards the end of the century and the outbreak of War with France, the cost of grain increased so much that the Committee took special measures to economize in the use of flour and bread. Hospital food seems always to have been a frequent source of complaints, yet the Common Diet provided in 1801 certainly gave both sufficient protein and calories if it was obtained and properly used. It was, however, short on fresh vegetables and variety. In addition to the meals provided, each patient had one and a half pints of beer and a twelve ounce loaf each day, but I have not found any description of the type of flour used or the colour or quality of the bread.

Although in 1750 and for long afterwards physicians treated the symptoms of disease rather than the causes, they could and did offer to patients, shelter and care, rest and food, and the easement of pain. These could all be obtained at home under favourable circumstances but for many they were quite unattainable. That was the justification for the hospital. The risk of entering hospital was that the patient would catch some other infection which would only compound his troubles. Acute infective illness of all types were common and "fever" was a frequent symptom. Sometimes, as in smallpox, the cause would be recognized by the presence of characteristic spots, but in many infections the principle symptom is fever and a more precise diagnosis was not then possible. Yet it was known that some patients with fever could infect others with the same illness and that this was particularly liable to happen in overcrowded wards.

We have noted the Infirmary was planned and built very quickly and as the busy years went past deficiencies, accentuated by constant overcrowding became more evident until at the end of the century, to quote the Revd. John Baillie (1801) 'In large wards where mutual misery and disturbance usually prevail, the diseases of patients are often in danger of being rather aggravated than remedied or relieved". At this point Dr. John Clark, then senior Physician, circulated the Governors with a letter describing the "results of an enquiry into the State of various Infirmaries ... and a proposal for the internal improvement and extension of that at Newcastle". (Baillie 1801). Within two weeks a committee was appointed and in another four weeks had reported in detail. The proposal was for extension giving new accommodation, and, in the original building, the improvement of ventilation and on the first floor, of better accommodation for patients waiting for examination or treatment, with increased provision for the physicians and surgeons working therein. This would reduce accommodation in the original building to fifty beds and the new extension would restore the accommodation lost. At the same time particular attention was given to the window sashes to ensure ventilation, to removal of wooden bedsteads which housed vermin and their replacement by bedsteads "made of hammered iron, with joints, to turn up in the daytime and to stand with their heads against the wall". (Baillie, 1801). The provision of a library was also agreed but that of an annex to the new building for the reception of cases of fever, either from outside or from inside the House became the subject of great dispute and

eventually led to the foundation of the Fever Hospital or "House of Recovery" in Warden's Close in 1804. The estimated cost of this new extension was £4,000, and when the foundation stone was laid on the 23rd September, £2,817 had been subscribed. In all £5,329 was raised and spent. The work, in brick and north facing, extended due west from the main body of the old building, and was not finished until 1803. It can be seen in Plate IXa between the original building and the Dobson Wing.

The Statutes of the Infirmary had been written and accepted by the Court of Governors even before the Infirmary was opened, but as McKenzie (1827) said "at length many of the original statutes for its regulation fell into disuse while others from the great improvement in the management of hospitals became unavoidably defective".

Dr. Clark's Committee, not content only to recommend structural alterations, also suggested the following greatly needed administrative changes:

(1) Separation of medical and surgical patients within the hospital.
(2) A weekly committee to control expenditure.
(3) A new rule to prevent the election of medical staff by "private solicitation" i.e. canvassing of Governors.
(4) Arrangements for the collection and maintenance of clinical records and statistics.

In 1803 as the new building came into use the Statutes and Rules were therefore recast and the House Committee was reduced to twelve ordinary and thirty six extraordinary members. The new rules also extended to the Medical Staff who were enjoined to "Study their deportment so as to unite tenderness with steadiness, and condescension with authority as to inspire the minds of their patients with gratitude, respect and confidence" and members were reminded that "strict temperance is incumbent on the Faculty". The physicians and surgeons were also told it was their "express duty" not to allow the wards to be crowded.

These very real changes and improvements were undoubtedly due to the care and industry of Dr. Clark who had gained all his proposals except the Fever House at the west end of the new building. Instead, the Fever Hospital was both physically and administratively separate from the Infirmary. Dr. Clark was then ageing, in ill health and must have been very disappointed that he had failed to bring order to the admission of "Fever" cases into the Infirmary. In 1804 he retired from the Infirmary and died the next year. Yet the Governors had acted with courage in a time of financial stringency and uncertainty.

Second Period 1804–1855

There seems little doubt that the Governors and Staff of the Infirmary faced the 19th Century with renewed optimism. Yet the new arrangements had not provided much increase in the number of beds, while the local population was growing steadily, the incidence of accidents must have increased, and if subscriptions and donations were greater so was the number of letters of recommendation available for use. The pressure for admission steadily increased and despite the "express duty" of the doctors more patients were admitted. In 1810 just under 1,000 patients were

treated during the year, and on the 31st March 1830, there were 128 patients in hospital and 1096 had been treated during the year. Throughout this time the number of surgical operations remained at about 200 each year.

The extension of 1801 had revived local interest in the hospital and increased the subscription income. Yet this still fell short of expenditure, and in 1802 the Infirmary was almost £1,000 in debt to its Treasurer. Although subscription income increased thereafter, capital had been used and in 1807 the "tariff", so to speak, for letters of recommendation was changed and from that time a subscriber for one guinea annually could recommend only two outpatients instead of one inpatient or two outpatients, and a subscriber of two guineas, one inpatient or four outpatients. But always the pressure on beds increased and was not much affected by the addition, in 1830, of a third floor in the East Wing which provided for another thirty beds, twenty-two of which were immediately occupied by patients transferred from the Lock Hospital[16] in Bath Lane after its closure from lack of support. This problem would remain a responsibility of the Governors until the end of the time on the Forth and it is surprising that they accepted the new burden when the pressure of other patients was so constant.

So the situation continued from year to year until in 1845 T. M. Greenhow,[17] who had been a member of the Surgical Staff since 1832, addressed a letter to the Governors on the general inadequacy of the Hospital. This must have been written on behalf of all the medical staff, and it was followed the next year by a statement from the House Committee that twenty more beds had been added to the complement. But this was simply by increasing the overcrowding of the wards.

Unfortunately there is little information available about the medical and surgical work of these years, but in January 1847 a momentous event took place. In that month Sir John Fife[18] performed the first operation in the Infirmary with the patient under general ether anaesthesia. In doing so he followed the example of Liston in University College Hospital, London when ether anaesthesia had first been used in England just one month earlier. Sir John was followed a week later by Mr. H. G. Potter[19] and the anaesthesia was very satisfactory (Arnison, 1895). Thereafter the scope and range of surgery were transformed, speed was not the overriding requirement and the patient was spared pain and shock. But the perils of wound infection still remained and would do so in Newcastle for another thirty years until the arrival of Listerian techniques of antiseptic.

By 1850 the pressure of work was again more than the hospital could bear. Dr. C. J. Gibb[20] (1851) had just become the Resident House Surgeon, and, at the age of twenty-four, he also addressed a letter to the Governors on behalf of the Medical Committee, pointing out the deficiencies and the need for more accommodation. Shortly afterwards Dr. Greenhow, much senior to Dr. Gibb, sent a second letter repeating his pleas of five years earlier. These letters may or may not have been the stimuli, but the House Committee and the Governors now acted with vigour. First the Annual Report, hitherto a single sheet devoted chiefly to acknowledgement of subscriptions, became a twenty page booklet; half was still a record of benefactors and subscribers but it also listed the Officers, detailed expenditure and receipts for

the year, included for the first time a medical report drawn up by the House Surgeon and finally an abstract of accounts. The Report of 1850 also proposed a scheme for a further enlargement which was adopted at the centenary meeting the next year when it received the practical and effective support of the Duke of Northumberland who, in giving his first donation, suggested that a sub-committee should, with John Dobson the chosen architect, visit hospitals in London and other cities. The result was a report which considered not only the new building but the rearrangement of the old accommodation, and in May 1852 a contract was signed for the building of the Dobson Wing comprising six wards, each of twenty-four beds, at right angles to the 1801 extentions.

This effectively doubled the size of the Infirmary and allowed changes in the use of the existing buildings. A new outpatient department was placed in the basement of the Dobson Wing, liberating the first floor of the old East Wing which became a dining room, museum, library and accident room. The second floor of the same wing became the living quarters for resident medical staff and students, while the third floor built in 1830 remained the Magdalen Ward as it had been since the closure of the Lock Hospital.

The foundation stone of the new building was laid in August 1852, and while building was proceeding two events occurred which demonstrated the social value of the Infirmary as an institution and helped its entry into the folk lore of Tyneside as in George Ridley's lines from "Blaydon Races".

"But them that had their noses broke, them cam back ower hyem;
Sum went to the Dispensary an' uthers to Doctor Gibbs,
an' sum sought out the Infirmary to mend their broken ribs"

(Allan T. & G. 1891)

The first was the devastating, but fortunately the last, epidemic on Tyneside of Cholera which killed more than 1,500 people in two months. (Callcott, 1984) During those weeks the hospital was made free and open to the poor at all hours of the day and night, anyone could call and obtain medicine or treatment at any time, and this access to help served to reduce anxiety. The second occurred just a year later when an explosion in a warehouse in Gateshead hurled burning material across the river into the crowd of spectators opposite and set fire to houses on the Newcastle Quayside and in the adjoining chares. Within four hours 123 injured or burned people were received and cared for; 60 were admitted and 63 allowed to go home after treatment. Fortunately the new outpatients department in the Dobson Wing had been opened two days previously and admissions were accommodated in the new but unopened wards. This was a remarkable response to a major emergency when there was only one resident medical officer and some students, when senior staff could not be summoned by telephone nor come by car, and when there were probably only about ten nurses in the whole Infirmary. Such incidents built public confidence and the feeling of goodwill and indeed affection which the people of Tyneside have shown towards the Infirmary and those connected with it.

Third Period 1856–1887

These incidents also contributed to the hope and confidence felt when the Dobson Wing was officially opened in the next year. With the increase in accommodation yet more patients were admitted and the total reached 1,916 a year. Anaesthesia had altered surgery. Some operations were more extensive but the numbers increased only slowly for the fear of wound infection was still present. The opening of the new Accident Room and Out-patients accommodation did, however, result in a rapid increase in "casual" patients, without letters of recommendation, simply presenting themselves in Out-patients seeking help in illness with medicine or in accident with treatment and dressings. Their numbers increased yearly and became a heavy charge on resources and time whilst being an important service to people who could not afford private medical care.

The cost of the Dobson Wing and the alterations amounting to £10,500 were met rapidly and, as happened after the 1801 extension, the subscriptions increased for some years but then fell away again while expenses mounted steadily. Also the high hopes regarding the abolition of hospital infections were dashed within a few years when erysipelas, wound infection and pyaemia recurred and persisted despite the adequacy of space and improved sanitary arrangements. The years which followed were dark indeed and the House Committee and medical staff seemed to be pulling in different directions. The first concerned primarily with expenditure and the second about equipment and conditions.

Yet, elsewhere, events were happening which were to change all medical thinking and open the way to modern surgery and surgical care. In France, Pasteur was conducting his studies from which the science of bacteriology was to develop (Vallery-Radot, 1920). In Glasgow and Edinburgh Lister was engaged in his clinical studies on the prevention of infection in compound fractures which resulted in the antiseptic regime which also prevented infection in new surgical wounds (Godlee, 1924).

In London, following her experience in the Crimea, Florence Nightingale was helping to establish nursing as a socially acceptable calling for educated women, and the nurse-training school at St. Thomas' Hospital became known throughout the country. (Abel-Smith, 1964). For the provision of skilled pre- and post-operative nursing complemented the exercise of surgical skill and the control of infection, making possible the great advances of the remainder of the century. Nurses generally had hitherto been ranked with and treated as servants. Apart from the fact that two nurses, Latimer and Campbell, were appointed in 1751 and one of them was dismissed for insobriety, before the move to the Forth they were not mentioned in any Annual Report until 1865 when eleven were recorded. The Report for 1858 gives the Matron's salary as £50 for the year, and the annual outlay for the salaries of nurses and servants combined was only £296 7s 2d. There cannot have been many employed nor could wages have been more than a pittance though food and shelter must have been provided.

By 1870 the number had risen to eighteen and the surgeons were anxious for G.

Y. Heath,[21] the senior surgeon, speaking for all the surgical staff, had reported "on the low flat there were only two day nurses and one night nurse for sixty patients" and Page writing of his recollections of his first appointment as Resident Medical Officer in 1870 said "There were no trained nurses in the Infirmary, some could neither read nor write; no specific uniform was worn, the few nurses were underpaid and their accommodation was such that it was impossible to obtain a better class of woman. There was a dirty, ignorant but kind old woman who had charge of Wards 7 and 8. I can see her now with her dress tucked up, petticoats exposed and stockings wrinkled, waddling from bed to bed with a huge linseed meal poultice to be applied gently and kindly to a suppurating stump" (Page, 1900). But Mr. Page was not content to criticise for he assisted the Senior Surgeon, Mr. Yeoman Heath, to establish a Nurses Home and Training School, and a Mrs. Abbot, a philanthropic lady, undertook to pay the salary of a Superintendent of Nursing for ten years, making only the condition that the appointment should be in the hands of the Medical Staff. Thus in these years were laid the foundations for the training of nurses and the beginning of provision of reasonable living accommodation.

Hospital infection, particularly in the surgical wards, was still all too common, but here again the situation was to change dramatically for in 1874 Dr. G. T. Beatson was appointed Resident House Surgeon. He came from Edinburgh where he had worked with Lister and was familiar with his antiseptic techniques for the prevention of wound infection. Not only did he have the necessary knowledge and experience but he must also have had the personality to introduce the antiseptic techniques into a hospital where he was both junior and newly appointed. Yet he succeeded and the innovations must have been widely accepted for only two years later the Annual Report for 1876 could record "Not a single case of pyaemia had occurred during the whole of the year that had just expired" (Hume, 1906). In that year there had been 297 operations and 1,630 in-patients, about the same number as twenty years earlier; in 1884, only eight years later and in the same theatres and wards, there were 908 operations and 2,578 in-patients, and the Infirmary was again in crisis. For the very success of antiseptics had brought its own problems. Anaesthesia and freedom from infection had widened the range of practice as new operative techniques were devised and improvements in results brought more patients seeking treatment. Overcrowding again became the insuperable problem for in an expanding industrial city in the middle of a coalfield, injuries and accidents were frequent and required immediate care.

Expenditure therefore steadily increased, again outstripping income, but nevertheless there was urgent need for more accommodation, and in the autumn of 1884 the question was faced when a Committee met under the Chairmanship of Lord Ravensworth. This time the problem was more complex and difficult than previously for the Forth had become, as we have shown, a very unsuitable site for a major hospital. Should therefore a new site and new hospital be the objectives or should yet another extension be built on a site which could only become progressively more unsatisfactory? An initial proposal was to build a 70 bed extension south from the Dobson Wing, but that was impractical because the foundations would have been

too expensive. This was followed by a scheme to build an extension for 150 beds from the centre of the main block south and this was agreed by the Governors. But the medical staff were united in opposition so the scheme was referred back to the Governors. Yet the medical staff recognized that more accommodation was urgently necessary, and argued that a new hospital was required on another site. Finally, early in 1885, it was agreed that a temporary ward intended to be used for only five years should be provided whilst a new hospital was built. This "temporary ward" was opened within nine months, nearly half the cost having been met by Sir William Armstrong[22] who had so often come to the rescue on previous occasions. Ironically, in 1985, this temporary building is the only part of the whole Infirmary which remains and is still in use—as a motor saleroom.

This new ward of fifty beds, the Ravensworth, was occupied by men, and the Infirmary could then accommodate 270 patients.

But the generous response to special appeals did not solve the underlying financial weakness which was that regular subscriptions were never sufficient to provide adequate income, and the Governors were dependent upon special appeals and bequests which though often very generous were erratic and unpredictable. Only the year after the opening of the Ravensworth Ward the Governors were compelled to withdraw £7,000 from capital funds to cover the deficit in the expenditure for the year and to reduce the debt owed to the Treasurer who seemed to have acted as a personal banker. Even so the debt to him remained at £2,450.

With the prospect of continued increase in costs, action was clearly required. The possibility of limiting admissions was seriously discussed but fortunately another course was followed. The Revd. Dr. Collingwood Bruce had long been interested and active in the work of the Infirmary and, a Life Governor since 1840, had been a member of the House Committee since 1869. During the Quarterly Court of Governors meeting held on the 4th November 1887 he spoke vigorously reviewing the financial situation and defending the management of the Institution, but pointing out that surgical operations had increased from 296 in 1876, the first year without hospital infection, to 1,129 in 1885. The result was the appointment of a special committee, independent of the House Committee (Bruce, 1905). That Committee proposed major changes and after discussion with both the House Committee and the Medical Board, most were adopted and put into effect by the Governors. The changes were radical and put new life into the Institution.

(1) The "letter of recommendation" was abolished and the hospital made free. Thus urgent and deserving cases, other than accidents, could receive attention and admission.
(2) The House Committee and the Medical Board were amalgamated. This also was a long needed reform which brought together in management two bodies, both anxious for the wellbeing of the Institution but who for many years had been divided by their different responsibilities.
(3) The Constitution of the House Committee was changed to give a larger representation of Workman Governors. All Works subscribing more than £10

could elect a Governor for each £10 subscribed, and all the workmen Governors would, themselves elect nine of their number to serve on the House Committee. Including the medical staff this increased the House Committee to 32 and it became a much more effective body.

(4) The method of appointing Honorary Medical Staff was changed from election by the whole body of Governors to selection by a representative Committee appointed for the purpose. This was primarily to reduce the effect of canvassing.

(5) The out-patient and casual departments were reorganized. These changes were largely restrictive, were regretted by many and all were retraced only three years later.

(6) The resident medical staff was increased in number and would in future consist only of fully qualified doctors. Until 1900 two house physicians and four house surgeons made up the "House", but thereafter the numbers increased steadily.

(7) The structure of the House Committee was strengthened by the increase in workmen Governors, by the inclusion of medical staff and by the appointment of a Chairman who would hold office for a year and then be subject to re-election. Previously a Chairman had been appointed at each meeting from those who happened to be present. Not surprisingly Dr. Bruce became the first established Chairman and remained so until his death four years later.

The year 1887 was also notable as the golden jubilee of Her Majesty Queen Victoria who agreed to a request that the hospital could be styled the "Royal Infirmary".

The workmen of Tyneside proved strong in their support. Fortunately the changes did not affect the level of other annual subscriptions in any adverse way, but they had been static for many years, so that the financial situation was redeemed only by a steady increase in workmen's subscriptions and by special gifts and bequests from those who wished the Infirmary well and realized its value to the City and district.

TOWARDS THE LEAZES 1888–1906

In 1888 James Rutherford Morison was appointed assistant surgeon and nine years later full Surgeon. Before his appointment Newcastle was noted for its surgeons who, like George Yeoman Heath, Luke Armstrong,[23] George Haliburton Hume,[24] William Christopher Arnison,[25] and Frederick Page, had bridged the antiseptic era into that of asepsis and had founded a School of Surgery. Rutherford Morison was to make that school known internationally as well as nationally. He was both a great surgeon and a great teacher.

But as we have said earlier, the very success of the new surgery increased the numbers of those seeking help; admissions and operations rose steadily whilst the duration of patients' stay became shorter; more patients required more nurses, and the number rose steadily to 72 in 1906. More nurses meant more accommodation, and accommodation for them was provided in a number of houses in the streets

near the hospital. But a proposal to build a Nurses Home in the hospital grounds received little support.

The need for a new hospital was now apparent to everyone but there were many differences as to how a new hospital would be achieved and indeed where it should be built.

In 1891 there were serious studies of all the possibilities; to rebuild on the existing site; to seek more ground to the North and extend; or to acquire a new site more suitable for a hospital. For the latter Fenham and, for the first time, the Leazes were mentioned. But no conclusion was reached and the matter was still unresolved in 1896.

Next year was to be the Diamond Jubilee of Queen Victoria, and Mr. Riley Lord, the Mayor, suggested that a new Infirmary would make the most fitting and appropriate memorial. Just as in 1751, the idea caught the public sentiment and was adopted at a great public meeting on the 7th October 1896, when the subscription lists were opened and £38,700 promised. The first objective of £50,000 was soon increased to £100,000, the sum to be promised by Jubilee Day, 20th June, 1897. That target was reached with a few days to spare, but in the meanwhile another application for enlargement on the existing site had been rejected by the City Council.

Thus matters stood when the Chairman of the House Committee, by newspaper advertisement, called together the Committee and the Governors to a special meeting on the 28th August 1897. That something extraordinary had occurred was apparent and considerable excitement prevailed until the Chairman announced he had received a letter in which Mr. John Hall, a local business man and ship owner and generous friend of the Infirmary, offered £100,000 for the building of the new Infirmary, making only the conditions that the whole of the £100,000 promised to the Queen's Commemoration Fund should be received and the Governors must erect the new Infirmary upon the Leazes or upon a site near the Recreation Ground on the North Road.

The next year, a decision of the Council and Freemen to grant the present site of the Royal Victoria Infirmary, was confirmed by a general poll of rate payers but the conveyance of the Leazes site was not signed and sealed until May 1900. Unfortunately Mr. Hall had died a few months earlier and it was found that the Queen's Fund was £8,500 short of the required total. That shortfall was promptly removed by a gift for that amount from Mr. J. C. Eno,[26] already a generous giver.

The same month the Prince of Wales, representing the Queen, laid the Foundation Stone of the Royal Victoria Infirmary, for the Counties of Newcastle upon Tyne, Durham and Northumberland, on the Leazes.

But there was yet another surprise, for in March 1901 Sir George Hare Philipson, the Vice-Chairman of the House Committee, received a letter from Cannes. It came from Mr. and Mrs. Watson-Armstrong, who said that they wished to give £100,000 to perpetuate the memory of Lord Armstrong who throughout his life had shown great interest in and concern for the Infirmary.

Thus the way was now open and the contract for the new hospital was signed in

August 1901. But five years full of effort still remained. It was not until 17th September 1906, that the last patient left the old Infirmary on the Forth for the new Royal Victoria Infirmary on the Leazes where work would continue to be supported and sustained by voluntary funds until the beginning of the National Health Service on the 5th July 1948.

NOTES

[1] The author wishes to acknowledge that, throughout the preparation of this paper he has relied heavily upon "The History of the Newcastle Infirmary" by George Haliburton Hume (1906).

[2] Hume, William Errington Sir, 1879–1960, Physician to the Royal Victoria Infirmary, Professor of Medicine Durham University College of Medicine. Notable teacher and local Medical Historian. Son of George Haliburton Hume.

[3] Lambert, Richard, Surgeon to the Infirmary 1751–79. Master Guild of Barber Surgeons of Newcastle. Innovator of technique of arterial repair.

[4] Page, Frederick 1840–1919. Resident House Surgeon Infirmary 1870–74, Surgeon 1877–1900. Professor of Surgery 1899–1910. Saw beginnings of antiseptic surgery, able teacher and surgeon.

[5] Askew, Adam 1694–1773. Came to Newcastle 1725, made a large practice, Physician to Infirmary 1751–71, acquired considerable wealth.

[6] Lambert, Cuthbert. Related to Richard Lambert, physician 1751–72.

[7] Cooper, William, Physician 1751–59, died 1759.

[8] Johnson, Francis, Physician 1751–71, died 1771.

[9] Hallowell, Samuel, Surgeon 1751–9. Married in 1732, Mary Horsley daughter of Revd. John Horsley author of *Britannia Romana*.

[10] Glenton, Frederick, Physician 1813–24.

[11] Keenlyside, William, Surgeon 1759–84.

[12] Gibson, Henry, Surgeon 1759–82.

[13] Philipson, George Hare, 1836–1918, Physician 1868–1896. Professor of Medicine 1876–1918. Knighted 1900.

[14] Morison, James Rutherford, 1853–1939, student of Lister in Edinburgh; in 1888 assistant surgeon and 1896 surgeon to the Infirmary. International reputation as surgeon and teacher.

[15] Clark, John, 1744–1805. Came to Newcastle 1775, physician to Infirmary 1788–1804, Co-founder of Newcastle Dispensary 1777. Worked much with the poor. Involved in controversy over admission to hospital of patients with Fever.

[16] Lock Hospital; for the treatment of venereal diseases.

[17] Greenhow, Thomas Michael, 1792–1881. Son of Edward M. Greenhow of Dockwray Square, North Shields. Practice in Newcastle from 1816; co-founder Eye Hospital with John Fife. Surgeon to Infirmary 1832–54. In 1831 advocated a University in Newcastle.

[18] Fife, John, 1795–1871, a very popular practitioner and surgeon. Steward of Barber Surgeons Guild. Was organizer of the first series of medical lectures given in Newcastle 1832–4. Knighted in 1840. Surgeon to Infirmary 1837–67.

[19] Potter, Henry Glassford, Surgeon to the Infirmary 1844–1854.

[20] Gibb, Charles John 1824–1916, Surgeon to the Infirmary 1855–70. Practised in Westgate Street, "everyone paid 2/6 for seeing Gibb", immensely popular.

[21] Heath, George Yeoman, 1819–92. Succeeded his brother Henry as surgeon to the Infirmary 1854–80. Great surgeon and teacher. Professor of Surgery 1889–92.

[22] Armstrong, William Sir, 1810–1900, trained as lawyer, became great Tyneside industrialist founder of Armstrong-Whitworth, 1887 became Lord Armstrong of Cragside.

[23] Armstrong, Luke, 1834–88, Surgeon to the Infirmary 1870–1888. A successful and popular practitioner was in partnership with C. J. Gibb 1856–69 then alone. A great sportsman.

[24] Hume, George Haliburton, 1846–1923, father of W. E. Hume, assistant surgeon 1869, full surgeon 1878–1905. Practised until 1915. A keen medical historian.

[25] Arnison, William Christopher, 1837–99. Five years in practice in Stanhope. Surgeon to the Infirmary 1867–97. Professor of Surgery 1892–9.

[26] Eno, J. C. Formerly Dispenser in the Infirmary had marketted Eno's Fruit Salts which became a popular saline drink.

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Note: The plates have been prepared from slides in the collection at Newcastle University: plates VII a and b are taken from G. H. Hume's *History of the Infirmary*, 1906, and plate IX b from *The Newcastle upon Tyne School of Medicine 1834–1934* by G. Grey Turner and W. D. Arnison (Andrew Reid & Co. Ltd., Newcastle upon Tyne, 1934).