

'PRO TANTO QUID RETRIBUAMUS'

by

HUME LOGAN, M.B., M.Ch., F.R.C.S.(E), F.R.C.S.(Ed.)

based on

PRESIDENTIAL ADDRESS given to :

*THE EASTERN DIVISION (N.I.) of the BRITISH MEDICAL ASSOCIATION
on the 25th September, 1975*

THERE are three addresses given each autumn in Belfast—the Presidential addresses of the Ulster Medical Society and the Eastern Division of the British Medical Association and the opening address to the new clinical students of the Royal Victoria Hospital. The evolution of medicine in the Province has been the most common subject, yet medicine did not develop in Belfast on its own but in the environment of a developing city with its own medical and physical problems. The Ulster Hospital for Children, with several other hospitals, was founded in the second half of the nineteenth century during a period when the city was enjoying the fruits of its industry. Neither the foundation of the Ulster Hospital, its part in medical education, nor the people concerned with it can be studied in isolation, but must be put in the perspective of the development of the city, and the medical knowledge available to deal with the illnesses of the period. These are the objects and themes of this paper.

Sir Arthur Chichester was granted the patency of the town of Belfast in 1603. The population at the first census in 1659 was only 589. The town which was on the river Farset, allowed boats to come almost to the Castle door. During the seventeenth century the growth of the town was minimal and it was not until the end of the century that the linen industry started in the area. Like many things good or bad, it was William of Orange with whom we must really start and he promised to encourage the linen industry after the English parliament destroyed the woolen trade. He brought French Huguenots, fleeing after the renunciation of the Edict of Nantes, to Lisburn. During the next hundred years the industry flourished.

Another famous name then entered the plot—Robert Joy, a man of many parts—a man of vision—an entrepreneur—a philanthropist—an architect—a truly great man. Robert's father had acquired a print shop in payment of a debt and he opened the Belfast Newsletter in it in 1737. With his brother Henry. Robert not only ran the newspaper but also a paper mill at the end of Joy Street. It was Robert who drew the plans for Clifton House and took a life-long interest in the charity, paying his last visit there in a sedan chair when he was unable to walk. He went on a tour of Scotland in 1777 where he was impressed by the new cotton spinning machinery invented by Hargreaves and Arkwright. On his return to Belfast he set up in partnership with Thomas McCabe, a watchmaker and jeweller, and they hired accommodation from the Charitable Society in Clifton House, solving their labour problems by the employment of children from the Society. Despite these innovations the cotton industry did not

really expand until after the Act of Union and by 1806 there were 2,000 people weaving cotton out of a population of 22,000 and virtually no linen was being woven. The problems of spinning flax by power had been solved in 1788 in England but the yarns produced were only suitable for weaving coarse fabrics, while Irish linen was fine and therefore the English competition did not really matter. In 1825 a process was developed whereby fine yarns could be machine spun and annihilation of the Irish linen industry looked imminent. The challenge was taken up, especially as the cotton spinning competition of England and Scotland was strong, and the cotton industry of Belfast was replaced by that of mechanical flax spinning. Over half the export of Irish linen was from Belfast and by 1835 it had become Ireland's first port. This, of course, was one of the factors which brought about our shipbuilding industry.

Between the points where the Farset which flowed into the Lagan at the end of High Street and the Blackstaff a little further south there was a tongue of dry land through the mud flats. Opposite this at low tide it was possible to wade across the Lagan to the Co. Down side and at this site the Long Bridge was built in the 1680's. If one stood on this bridge in the 1830's the site was very different from to-day. The shallow water of the Lagan meandered out to sea reaching the deep water at Garmoyle Pool three miles away. It was here that the large vessels anchored and lighters carried the cargo up to the quays. In 1785 the "Corporation for Preserving and Improving the Port and Harbour of Belfast" was set up. It was popularly known as the "Ballast Board" and later as the Harbour Commissioners. Nothing very much happened until 1839, when a deep channel was made for the Lagan, cutting off one of its bends. The material excavated from the channel was banked up—on the left side for reclamation along the town shore and on the right to form Dargans Island later called Queen's Island. Simultaneously the river was deepened from the Long Bridge to the new channel and in 1849 a further channel was opened which allowed large ships to sail up to the town quays.

The first shipbuilder of any consequence in Belfast was William Ritchie who came from Ayrshire in 1791 and built wooden boats on the Antrim side. The first firm to open on Queen's Island was that of Thompson and Kirwan in 1851, but this company does not seem to have prospered. At the same time Robert Hickson started the Belfast Iron Works in Eliza Street. He made boiler plates but these could be made cheaper in England, so he sought a new outlet for his iron plating. He turned to shipbuilding and took over a site on Queen's Island, employing Robert Harland as his manager. Harland bought him over in 1858 for £5,000 getting their money from the uncle of his partner, E. W. Wolff. By the middle of the nineteenth century Belfast had a thriving linen industry and shipbuilding, and great physical changes were taking place in the port and the town in general. At this time there was one hospital in Belfast. It had started as a dispensary in the Charitable Society building in 1792. Flourishing for a few years it went through a bad period and consequently fell into debt and was almost abandoned. However, in 1797 public interest revived and a house was rented in Factory Row (now Berry Street). Malcolm records this as being the first fever hospital in Ireland, but in fact one had opened in Limerick seventeen years earlier.

Again the Dispensary and Fever Hospital fell on hard times, perhaps as a result of the political and economic troubles of the time. After being closed for two years the Dispensary took over three houses in West Street at the corner of Smithfield. Despite many trials and tribulations the charity succeeded and went from strength to strength and ultimately moved into a purpose-built hospital in Frederick Street in 1817. One hundred and sixty years later this hospital has progressed to become our main teaching hospital, the Royal Victoria Hospital.

One of the founders and the man who did so much to keep the original dispensary going through its formative years was James McDonnell, one of the McDonnells of the Glens who was born in 1762 near Cushendall. He qualified in Edinburgh at the age of twenty-two and wrote a thesis "On the Drowned" in which he discussed methods of resuscitation, including as a last resort, blood transfusion. Settling in Belfast he not only built up a large practice but also a valuable library. He was one of the greats of his time. Not only was he the premier doctor of Belfast and its environs, but he obviously had foresight and tenacity. His fight for his hospital did not always make him popular with his colleagues and Malcolm said of him "whether we view Dr. McDonnell as a philanthropist, a scholar or a physician, we cannot but award him the highest place amongst the memorable of the land". He must have been strong physically as well as mentally as he used regularly to visit his mother in Cushendun once a fortnight. He left Belfast at midnight, found a fresh horse at Glenarm, rested while he talked to his mother and then rode back to Belfast, one hundred and twenty miles on horseback in twenty-four hours. With a constitution like that it is no wonder that he lived to the ripe old age of eighty-two.

Three years after opening in Frederick Street a resolution was passed that "The Physicians and Surgeons of Belfast should be invited to place pupils in the General Hospital to acquire experience by observing its practice and in the course of a few years, it might become a school of Physic and Surgery of no trifling importance to the young medical students of this neighbourhood". Walter W. Bingham, of Dundonald, became the first registered pupil on the 21st December, 1821.

In 1826 Professor Drummond wrote to the Belfast News Letter suggesting various lectures in materia medica etc., should be arranged and also clinical lectures in the Fever Hospital, but the staff of the hospital rejected Drummond's suggestion. The matter was not turned down completely as they stated that if it was deemed advisable, lectures might be undertaken and a year later on the 3rd June, Dr. James McDonnell gave the first clinical lecture.

Three years after this the establishment of a medical faculty at Inst. was suggested, but it was five years before this was agreed. Therefore it was not until 1837, with formal teaching at Inst. and clinical teaching at the General Hospital, that the Belfast Medical school was recognised for the diploma of many of the Royal Colleges and medical degrees of the University of London. Even at this time part of the studies were probably done outside Belfast as students were not admitted to the Lying-in Hospital in Clifton Street until 1853, although permission for them to attend was granted in 1851. The students were housed in Upper

Townsend Street and when a patient went into labour a white card was placed in the labour ward window, a boy being employed to watch the window and warn them—the fee apparently being sixpence.

The next development in the medical school was the opening of Queen's College in 1849. Not all the students moved to Malone as there was no building for anatomy in the new site. This subject had been taught at Inst. before there was a medical faculty there. Of course the supply of bodies for dissection was a problem there as it was in Dublin. When the College of Surgeons purchased new premises in Mercer Street in 1787 they also had to buy an adjoining house to gain entrance to Goat Alley (now Digges' Lane). This was a passage through which bodies could be discreetly brought to the dissecting room in the college. Secrecy was important as the bodies were purchased from resurrectionists who raided the graves of the poor. Their technique was to expose the head end of the coffin and, by means of a special lever, break open the top part and remove the body which was then stripped and the clothes replaced. The law at this time judged stealing the clothes as a felony punishable by hanging or transportation, whilst body snatching was only a misdemeanor worthy of less stringent measures. In 1829/30 the price of bodies varied from ten to twenty-five shillings in Dublin, while in England they fetched £10—£20 and consequently an export business developed. Relatives often guarded graves till the bodies decomposed or paid guards to do this, but the latter were inclined, for a suitable sum to turn a blind eye. As business increased the raiding parties began to use arms and this, together with the exposure of Burke and Hare, brought about the act which allowed unclaimed bodies to be taken from the Poor Law Unions, and a more reliable and more ethical supply of bodies was made available. Even this supply to Inst. was suspended by the Union Workhouse for a time in 1863 as the Board of Guardians found it objectionable and the dissecting room was thought to be a source of infection in the town.

One of the pupils at Inst. at this time was Andrew George Malcolm who was to become one of the giants of the profession in Belfast. He was born in Newry in 1818, the son of a clergyman. After graduating in Edinburgh in 1842, when he obtained the gold medal for his thesis on 'Fever', he joined the staff of the General Hospital, and in 1853 started the Clinical and Pathological Society of which he became president three years later. Dr. R. H. Hunter stated that Malcolm did more for the advancement of science in Belfast than any other man of his time and that he was a true reformer and missionary. When Malcolm died of 'disease of the heart' at the age of thirty-seven, the News Letter suggested that a statue should be erected "within the palings" of the General Hospital in his memory. The statue was never erected, but his widow founded the Malcolm Exhibition which is still competed for by fourth year students in medicine and surgery.

Malcolm wrote the history of the General Hospital in 1851, but of more practical importance was a paper which he read before the statistical section of the British Association in 1852 entitled "The sanitary state of Belfast, with suggestions for its improvement". He started by describing the sewers of the city and pointed out that they opened into the Lagan. At high tide the solid effluent was unable to

escape and therefore for some hours afterwards the sewers were effectively blocked and consequently "the lowest part of the level district becomes inundated, and the residents suffer directly and immediately in health and property and long after from the humidity which remains". At this time upwards of 1800 houses were accessible only by a covered archway, the majority having only one outlet. Comparatively few had piped water the rest being supplied either from public fountains, pumps sunk by landlords or by water carts. The main thoroughfares were clean in that all vegetable and animal remains were removed, but 'in the poorer localities, where the accumulation of offensive remains is the greatest, we must confess there is a lamentable deficiency'. In 1848, 180 thoroughfares were unpaved. Upwards of 3,000 houses were without yards of any description and a much larger number of the poorer houses were "deficient in still more necessary accommodation". The typical house had four rooms on two storeys, generally occupied by two families. The rooms varied from 7—10 feet square. "Such a house is manifestly insufficient to be the domicile of ten individuals; but we have now, and not infrequently so, as many as eighteen or even twenty persons sleeping within such limited apartments". It is no wonder that disease was rife, especially fevers in such confined and overcrowded quarters. In 1855 when the wages in the linen trade were well under £1 per week, the average age of death was nine, half the living population was under the age of twenty and the infant mortality rate was around 150 per 1,000.

In the years 1847/48 nearly 15,000 were struck down by dysentery and fever and 2,500 people died. A Sanitary Committee was set up at this time under Malcolm, introducing many new measures, but its main contribution was the anticipation of the arrival of the cholera which was expected to sweep the country for the second time. The first epidemic had been in 1832, and Malcolm gave a detailed account of it in his "History of the General Hospital". It makes extraordinary reading. Crossing the Russian border in 1830, Asiatic cholera—"the death winged enemy" slowly crossed Europe, reaching Sunderland in October, 1831 and Belfast in February 1832. In anticipation the streets and houses were scrupulously cleaned and it was decided to isolate the victims and their families. Cholera wards were quickly erected at the Fever Hospital and a building in Lancaster Street was rented to house the contacts. Bernard Murtagh, a cooper, was Belfast's first case—his symptoms were complete collapse and he died nineteen hours after the onset. The epidemic lasted forty-six weeks, the mortality was 16 per cent and the black draped cholera cart with its bell ringing warning the people to bring out their dead was an all too common sight in the town. The general panic was such that the people were afraid of being buried alive as it was very important to remove the infected corpses immediately.

The second epidemic occurred in 1849 and while 5 per cent of the population was affected in the first wave only 3 per cent were affected in the second. In total numbers there was not a great difference as the population had grown considerably. Perhaps it was more significant that in 1847 there was an outbreak of typhus. While this was always a slumbering plague in overcrowded conditions, its origin in this case was interesting. The Swatara was an immigrant ship which sailed from Liverpool but was beaten back by bad weather at the same time as typhus first

appeared on board. The ship put into Belfast and the sick were taken to the General Hospital. Setting out again the captain was obliged to put into Derry because of the spread of the disease amongst the passengers. After sailing yet again the ship was once more forced to go back into Belfast with a large porportion of the passengers attacked. The disease was by now spreading through the town and more fever beds were urgently required. The Union Infirmary was enlarged by nearly ninety beds, a shed was built in the grounds of the General Hospital, all the old cholera buildings were filled with patients and the College Hospital was opened in Barrack Street. Fifty cases per day were being admitted early in the epidemic rising to nearly one hundred per day in July. Over 2,000 victims were in hospital at one time and tents had to be erected to house the convalescent patients. The total number of admissions was 13,600—one out of every five persons being attacked.

Fever was not the only pestilence, there was the added complication of the failure of the potato crops in the mid 1840's. Famines were not very uncommon in Ireland and basically were brought about by the low standard of economic life of the people most of whom lived only one season ahead of starvation. Such a state ended in England at the end of the fourteenth century with the introduction of new root crops which allowed the cattle to be fed throughout the winter, instead of being killed off in large numbers as before and consequently a lean year could be overcome. This was not the case in Ireland where penal enactments, wars, confiscations and over-population had depressed the economic standards of the peasants. The potato was their staple diet because it was easily cultivated and more important, it was cheap and nearly three million came to be dependant upon it for their existence. The economic plight of these people was such that they could not lay in supplies to carry them over the bad times and when it arrived there was chaos. One season of cold and wet weather caused distress, two consecutive bad seasons meant disaster—a famine. On the other hand wet and warm conditions allow profuse growth of *Phytohthora infestans* or potato blight. There was sporadic blight in 1845 but the spring of 1846 was hot and damp and the blight broke out with a vengeance. By the winter of 1846/7 famine was rife. The people became apathetic and crowded together in large numbers to keep warm—the conditions most suitable for the body louse to thrive and pass from subject to subject—endemic typhus became epidemic and this was accompanied by re-lapsing fever. The loss of the potato from the diet also meant the loss of vitamin C and scurvy was an added complication. Furthermore, dysentery, Ruith Fola or bloody flux was another sequela of famine and while there were only 1800 cases in Belfast the mortality was 32 per cent. Dr. Seaton Reid described the epidemic as lasting two years (1846/8) being introduced at a time of plenty in the town by fugitives from elsewhere. It is staggering to think that in Ireland probably one million people died.

In Belfast by the mid-nineteenth century there was increasing industrial expansion with a thriving linen industry and an expanding shipbuilding industry. These provided work for the people who flocked to the town. They had to be housed and fed and some attempt had to be made to look after them medically. The General Hospital was still the main hospital in the mid-century, although there was an

infirmary at the Union. As the population of the city grew over the next twenty-five years other hospitals were to open. There is no very obvious reason why philanthropy should have been so delayed but up till this time no provision had been made for the specialised treatment of children, then two hospitals were opened within a short time.

The Ulster Hospital for Children first opened its door in the summer of 1873, at 12 Chichester Street, the present site being McAfee's Shoe Shop. Its founder was Dr. John Martin who was born in 1839, the son of a general practitioner in Newtownards. He attended classes in Medicine at the Andersonian Institute in Glasgow and obtained his licence at the Royal College of Surgeons in December, 1858 at the age of nineteen and immediately became the dispensary doctor to Five-miletown. The only record about his period there was that he paid an annual rent of £7.11.8d recorded in a rent book of that time. In 1868 he qualified as a Licentiate of the King's and Queen's College of Physicians—now the Royal College of Physicians in Ireland. Shortly after this he returned to Belfast having been appointed apothecary to the Barrack Street Dispensary—one of the most important dispensaries in the town, and after two years became its medical officer. He held this post for sixteen years and during this time he lived at 9 Clarence Place. Next door in number 11, lived his brother-in-law, Dr. Henry Whittaker, who was not only Belfast's first Medical Officer of Health, but first co-secretary of the Ulster Medical Society and also its President in 1892/3. The wives of both these men were on the Ladies Committee of the Ulster Hospital. They were the daughters of Mr. Francis Glenfield, a soap and candle manufacturer in York Street.

Dr. John Martin seems to have been of above average ability and enjoyed an extensive practice. A religious man, he was a member of St. Anne's Church and in his will stated "my express wish is that my eldest son shall be brought up to the church (Church of Ireland preferred)". Judging by the criteria he laid down for the education of his children and his bequests he must have been reasonably well off and his obituary notice in the Belfast News Letter after his death in 1884 stated that he was a large shareholder in the Belfast, Holywood and Bangor Railway, in the affairs of which he took an active interest. Apart from being a Conservative, little more is recorded about the man who recognised the need to found a children's hospital. There is no reference to the Ulster Hospital in his obituary, perhaps he was out of favour having resigned from the Ulster Staff and the Management Committee in 1881, when he opposed the opening of beds for gynaecology and obstetrics. By this time the Hospital had moved to Fisherwick Place where the A.B.C. Cinema now stands and the ninth annual report in 1882 of the hospital stated that the new beds were opened primarily to meet the requirements of the Royal University of Ireland. For his degree, a student had to produce a certificate given by a hospital recognised by the Royal University, to show that he had received clinical instruction in midwifery and in the special diseases of women and children in addition to the certificate of clinical instruction in general diseases. At this time there were four beds for the diseases of women in the General Hospital and so the opening of more beds in the Ulster was important—in fact in 1883/4, forty-six patients were treated as in-patients and 803

as out-patients. Furthermore, twenty-eight students attended clinical lectures at the hospital. As far as can be ascertained from the annual reports, the obstetrical side was of a purely domiciliary nature. The medical assistants under the supervision of the staff located themselves in the different parts of the town where their services were most required. Another stipulation of the University of Ireland was that there should be a Professor of Obstetrics and Professor Dill joined the staff. He was a member of the same family as General Sir John Dill, Chief of the Imperial Staff during the last war. Born in Castlefin, Co. Donegal, he qualified in Glasgow and was at one time associated with James Young Simpson of chloroform fame. He was unique in that not only was he Professor of Midwifery but he was also the city coroner. He had joined the Lying-in Hospital in 1853 being elected to the staff two years later. He was not subsequently re-elected, and while the reason for the Ladies Committee's decision is not known, he was later described as "combative and at times pugnacious, but was essentially kindhearted". Of course, this was a hospital run by ladies, for ladies and curiously enough founded by a lady —Mrs. Martha McTier. This lady's maiden name was Drennan, sister of Dr. William Drennan who was one of the founders of the United Irishmen of which he was president for two years. It was Drennan who first coined the famous soubriquet "the emerald isle". Drennan was tried for sedition in 1794 and acquitted. Malcolm wrote after his death, at the age of 66, "A patriot in the truest sense. A man of the highest integrity, and splendid talents, not even his enemies could conceal their admiration of his genius and character". Drennan should also be remembered as one of the founders of the Belfast Academical Institution in 1810.

It was in Fisherwick Place that surgery really started in the Ulster Hospital, facilitated by the introduction of anaesthesia twenty years earlier in America. It was first used in Ireland on New Year's Day 1847 by John McDonnell to amputate an arm which had gone septic as a result of a thorn prick. John, was the son of our own famous James McDonnell.

The art of surgery as it certainly was then, was no longer practised by barbers but by men who had studied anatomy, physiology and pathology. We are talking of the time of Dupuytren, Cooper, Colles, Syme and Lister. Of course it is Lister who gets all the credit for antiseptic surgery although he was not the first to use it. He states "in the year 1863 I was much struck with the account of the remarkable effects produced by carbolic acid upon the sewage of Carlisle" and it was on this observation that he based his studies. Therefore by the time the Ulster Hospital opened, surgery could be performed painlessly and with a much greater degree of safety than was hitherto possible. When we consider the size of the Chichester Street premises and the income of the hospital it is not surprising that in the second annual report we find "the committee have not thought it desirable to set apart an operating room nor incur the expense of instruments and appliances" Yet a year later we find it recorded that "several major and numerous minor operations have been performed". By the time the hospital moved to Fisherwick Place we find Dr. Esler reporting "of those admitted a large proportion were surgical cases requiring operative interference". He acknowledged the timely supply of surgical instruments lately added to the operating room, and ex-

pressed the satisfaction of the Medical Staff with “the accommodation afforded by the present premises, which are found to be ample and convenient”. In the following year he reported that “many of these patients requiring a lengthened attendance, having been admitted for surgical operations”. In 1887 the first two ovariectomies were performed, both being successful, and in the following year a hysterectomy was performed and “an airy room was specially fitted-out for abdominal and other serious operation cases”. This allowed an increase in the number of operations and by 1890 thirty-five operations were performed with anaesthetics being given twenty times and “in none was there subsequent surgical fever”.

In the staff meeting minutes for May, 1889 we read of the trouble which these operations caused. The Lady Superintendent wrote to the General Committee complaining of the inconvenience caused when grave operations were performed in the gynaecological department. Firstly, the Extern Children’s Department was inconvenienced because the beds from the Gynaecological ward were moved there. Secondly, the store room was closed, and therefore blankets, pillows etc. had to lie about the wards ‘causing much untidiness’ and two of the nurses had to sleep out during the time the case occupied the ward. Thirdly, owing to the lower bathroom not being used all the slops had to be carried to the bathroom on the same landing where the nurses and servants slept. As would have happened today the staff first debated the propriety of the Lady Superintendent in not having first placed the report before the Medical Staff Committee. At their next meeting they replied to the report stating that these operations must be performed and making some suggestions to change the arrangement to facilitate the Lady Superintendent.

It was such understanding and co-operation which led to the Ulster Hospital of today. We still get opposition when initiating new techniques, but the obstacles seem trivial to those of our great predecessors. We are fortunate to be members of this great medical profession—a profession which faces considerable problems at present. Our city has supported us in the past and although it too faces great difficulties at present, we know that out of adversity comes greatness. The motto of the city is ‘Pro Tanto Quid Retribuamus’—for so much what shall we return. It is up to us, to ensure that the future is as great as the past. Let us hope that in one hundred years someone can look back with the same pride as we do today. ‘Pro Tanto Quid Retribuamus’.

I wish to acknowledge the help given to me in preparing this paper by Mr. Vitty of the Linenhall Library, Miss Hamilton of the Public Records Office, Mr. N. Nesbit of the Belfast Museum, Dr. R. W. M. Strain, many colleagues who lent me books and gave valuable advice and Miss L. Gribben who typed the manuscript.