

# History of Anaesthesia in Malta\*

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The earliest reference to surgical anaesthesia occurs in the herbal of Dioscorides in the first century of our era. Dioscorides recommended the oral administration of the wine of the root of the mandrake for the dulling of pain in patients undergoing surgery as a potion to put the patient in a deep sleep.<sup>1</sup>

During the middle ages other ways of producing anaesthesia were devised. There was the narcotic sponge (*spongia somnifera*) where a sponge was immersed in a solution of mandrake, belladonna and other drugs and then pressed over the mouth of the patient who, by sucking in the solution, fell into a deep sleep. The so-called hammer-stroke was also practised. This consisted in encasing the patient's head in a kind of helmet on which the surgeon delivered a good blow with a wooden hammer in such a way as to knock the patient unconscious and thus enable him to go through the operation without feeling pain. Another method was to compress the carotid arteries to produce syncope and insensibility to painful stimuli.<sup>2</sup>

In 1799 Sir Humphrey Davy suggested the use of nitrous oxide to remove pain in surgical operations and in 1815 Michael Faraday noted that ether had a similar effect.

In 1842 ether was administered to surgical patients in America but it was not until the 16th October 1846 that the method was demonstrated to medical men by Mr. William Thomas Morton. The news of this event was announced in Malta by the *Malta Times* of the 22nd December 1846 when a correspondent from Boston wrote how the dentist Morton had tried it "about two hundred times with almost uniform success" and that it had also been applied in major operations.

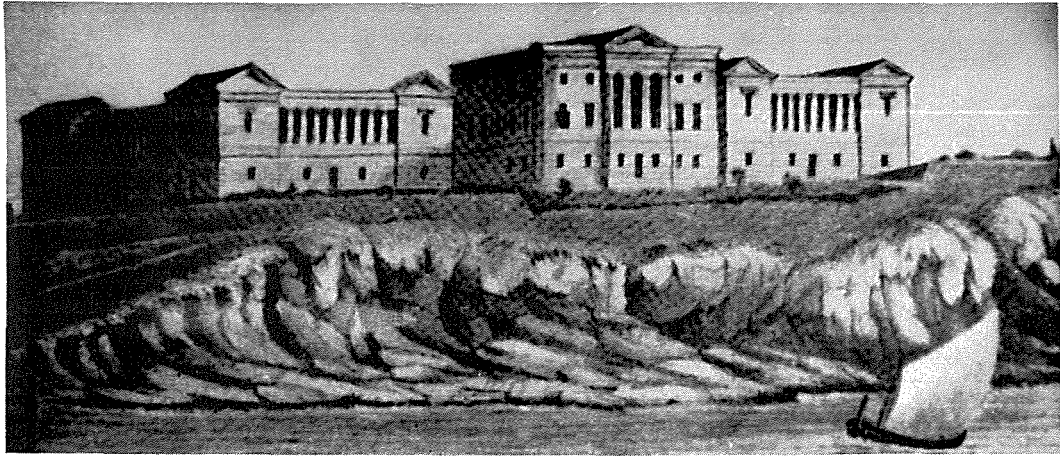
In Great Britain the first operation under ether anaesthesia was performed at University College Hospital London on the 21st December 1846 in a case of amputation through the thigh.<sup>3</sup> On the 26th January 1847 *The Malta Times* reproduced news of painless operations under ether, done at Addenbrook's Hospital in Cambridge, from the *Cambridge Advertiser*. "This outstanding discovery", reported

the paper, "which promises to be one of the very greatest wonders of this wonderful age, appears now to be authenticated beyond all doubt. In the course of these few days Mr. Humphrey, (one of the surgeons of Addenbrook Hospital) has performed a variety of operations on patients on whom he had previously superinduced a state of temporary imbecility by the mere inhalation of the vapour of ether and that in every case the experiment has been attended with complete success. He has drawn teeth, he has performed painful incisions and a variety of operations, which in the natural state of things would be attended with excruciating pains, without inflicting upon his patients any further inconvenience than a little temporary oblivion of either pain or enjoyment". The paper ended by "positively" assuring its readers that any operation could henceforth be performed without the slightest pain.

Further reports of other operations under ether, as carried out in various London Hospitals, appeared in the same Maltese newspaper of the 9th February 1847. A month later the same source published an account of the first use of ether anaesthesia in Malta. It told how Dr. Thomas Spencer Wells, on the medical staff of the British navy in Malta, had devised an apparatus for ether administration which, however, was only partially successful in inducing anaesthesia in a case of partial amputation of the hand. Dr. Spencer Wells, therefore, brought Hooper's Inhaler from England which he used on the 6th March 1847 at the Naval Hospital of Bighi with complete success.

On the 16th March, Dr. Thomas Spencer Wells demonstrated his apparatus to Maltese members of the *Societa medica d'incoraggiamento* (The Medical Society of Encouragement). Spencer Wells addressed the members in Italian and invited them to try the effects of ether inhalation on themselves. Two of them – Dr. F.L. Gravagna and Dr. Luigi Calleja – volunteered to undergo the experiment. The results have been recorded in the minutes of that meeting and are thus described: "Dr. F.L. Gravagna . . . became red in the face, had a fixed stare and felt a tickling sensation in the throat. Dr. Calleja also inhaled the ether and his face turned red, the eyes

\* Expanded text of a paper read at the inaugural meeting of the Association of Anaesthesiologists, Malta, 18 November 1983.



**Bighi Hospital from an old print. This hospital used by British servicemen knew the introduction of inhalation Anaesthesia in Malta by Dr. Spencer Wells in 1847.**

filled with tears and appeared bloodshot, the sense of touch diminished, his head spun round and ached and consciousness was lost for an instant. Dr. Gravagna submitted himself to another trial. He complained of pain in the head, assumed a facial expression of stupidity and burst out into moderate laughter. Both doctors subsequently suffered from headaches”.

On the 23rd March 1847 Dr. A.J. Burmester published an extensive article on ether anaesthesia in a local paper to stimulate members of the medical profession in the island to investigate its merits and apply it to the relief of suffering humanity. He experimented upon himself and reported the sensations he felt while under the influence of ether. The apparatus used was Hooper’s Inhaler. On the 30th March he publicly invited medical men and “other scientific persons” to view this apparatus at No. 63, Strada Reale, now Republic Street, Valletta.

By the 6th April, a dentist practising at No. 40 Saint Zachary Street, Valletta, was advertising teeth extraction “without the least pain by the inhalation of vapour ether”.

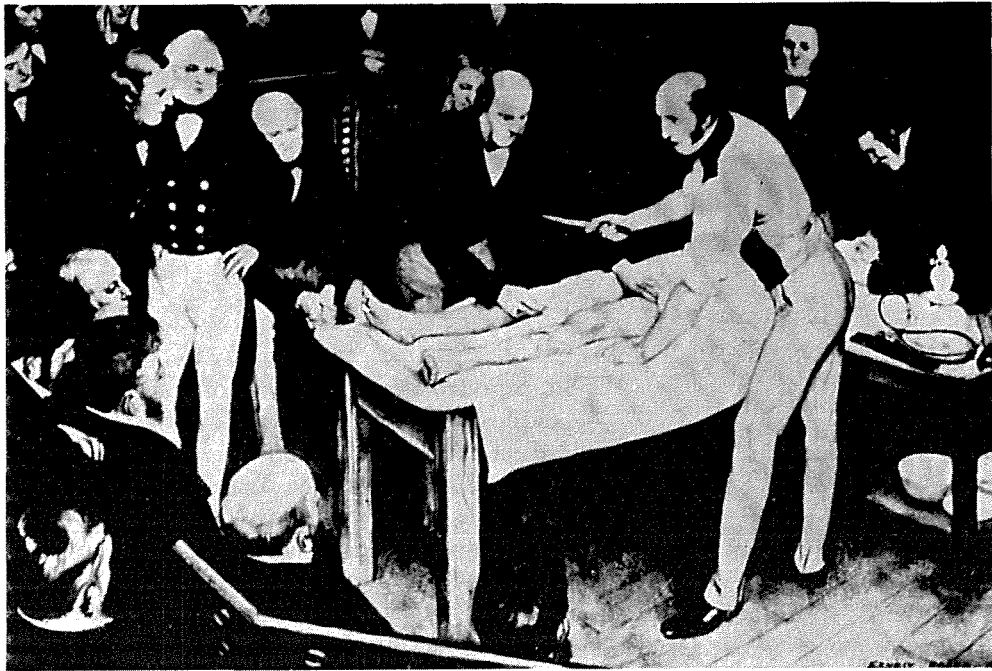
The reading public in Malta was kept abreast of the developments in the use of ether in London, Vienna and Paris but some of the information reaching the island was far from reassuring. Warnings were sounded in France against “careless and unprofessional tampering” with ether together with cautionary advice to the medical profession with regard to the manner of its use. Italian investigators counselled “great prudence” in its use to prevent fatal accidents of which many had already occurred abroad. All these warnings militated against the rapid acceptance of ether anaesthesia with which very few medical men were as yet familiar. It is not

to be marvelled at, therefore, if three months after its introduction in Malta patients still preferred to “suffer excruciating pain than take advantage of the most wonderful discovery of the day”.

Of the pioneers of anaesthesia in Malta, Dr. Thomas Spencer Wells started his medical career as a naval surgeon and spent six years in Malta in this capacity at the British Naval Hospital at Bighi. He was elected Fellow of the Royal College of Surgeons of England and enrolled as member of the Maltese Society of Encouragement. In 1847 he published the medical history of a case of hydrophobia in a Maltese woman on whom ether inhalation was unsuccessfully tried in an attempt to abolish the spasms of the muscles of deglutition. He departed from Malta in October of the same year. He later gained recognition as the inventor of the forceps that still bears his name and as a prominent surgeon and gynaecologist in London.

Dr. A.J. Burmester was a member of the Royal College of Surgeons of England and previously a House Surgeon to St. Bartholomew’s Hospital and to the General Lying-in Hospital of London. He was very fond of athletics and of the practice of pistol firing. It was through this last hobby that he met an untimely death in tragic circumstances fourteen months after his first experiments with ether inhalation, having accidentally shot himself on the 29th May 1848.

In the meantime the discovery of a new anaesthetic – chloroform – had been announced and news about it reached Malta. Professor James Young Simpson made known his work on chloroform on the 10th December 1847 and twenty-five days later a local newspaper commented on “a therapeutic agent in place of the inalation of ether,



*Robert Liston's first open operation under ether  
at University College Hospital, 21st December 1846.*

which we are assured is capable of being introduced with greater rapidity and success into the system... The more efficacious agent is chloroform... No particular instrument or inhaler is necessary... all that is required is to diffuse a little of the liquid upon a hollow shaped sponge or even the pocket handkerchief and apply the same over the mouth and nostrils so as to be fully inhaled".<sup>4</sup>

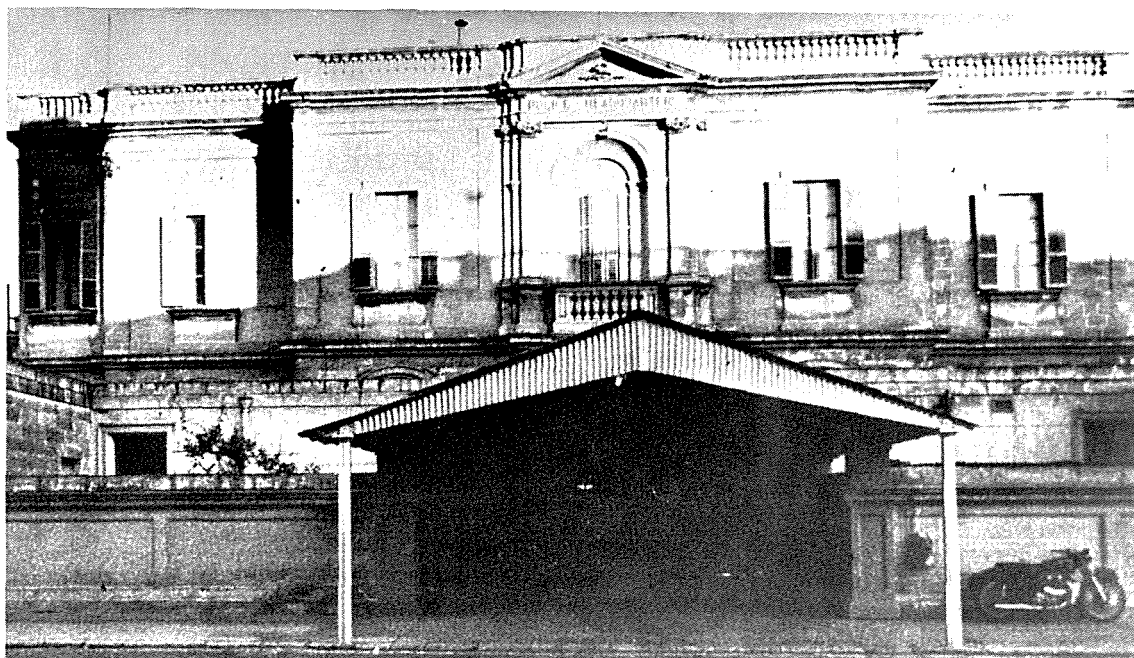
The Maltese literary and cultural periodical *Il filologo* of the 4th March 1848 also dedicated a short annotation on chloroform containing brief references to Eugene Soubeiren's discovery of chloroform in 1831, Jean Baptiste Dumas' working out of its chemical formula in 1834, M.J.P. Flourens' experiments in 1847 and James Young Simpson's application of it as an anaesthetic in the same year. A description of the physical characters of chloroform and its alleged advantages over ether concluded the article.

Chloroform anaesthesia did not pass into general use easily. Its inhalation to relieve the distress of women in labour, for instance, aroused strong objections in both ecclesiastical and medical circles in England so much so that it was only after Queen Victoria accepted it from Dr. John Snow at the birth of Prince Leopold in May 1853 and of Princess Beatrice in April 1857 that opposition began to subside.

There seems to have been no echoes of these controversies in Malta.<sup>5</sup>

The first death from chloroform, due to cardiac arrest, occurred in Edinburgh on the 28th January 1846.<sup>6</sup> In Malta the first fatality happened on the 20th April 1855 in a patient undergoing amputation of a finger following an accident. The operation was being carried out in a private house by a British practitioner, Dr. Francis Sankey. A newspaper reported that hardly had the operation finished "than the pulse trembled, the blood ceased to flow and the patient, a strong-man of 35, expired without a groan". Dr. Sankey called in his colleague Dr. Charles Galland, Professor of Surgery, but in spite of their endeavours, for more than three hours, to restore "suspended animation", all attempts at resuscitation failed.<sup>7</sup>

By 1864 chloroform inhalation had become firmly established in Malta. In the British military hospital, two surgeons were in charge of the anaesthetised patient – one to administer the chloroform and the other to monitor the patient's pulse. Training in the preparation of patients for chloroform anaesthesia and for tendering assistance in cases of impending death from this anaesthetic was included in the syllabus of studies of the School for Nurses set up in February 1882 at the Central Hospital at Floriana.



The building, now the Malta Police Headquarters, previously housing the Central Hospital, Floriana, where the first laparotomy to be carried out in Malta was performed under chloroform on November 22, 1890.

The first laparotomies to be carried out in Malta were performed under chloroform. The first one on record was done at the Central Hospital on the 22nd November 1890 by Professor G.B. Schembri, the Professor of Midwifery (1880–1904). The patient was a woman of twenty-seven years suffering from a cystic adenoma of the left ovary. A second laparotomy was performed at a private house in Senglea four days later for the removal of a tumour adherent to the omentum and the abdominal wall. Both operations were successful. The first Caesarean operation on the living was carried out under anaesthesia by the same professor on the 28th May 1891, but it is not stated whether under chloroform or ether, on a woman with a restricted pelvis. Both mother and baby survived.<sup>8</sup>

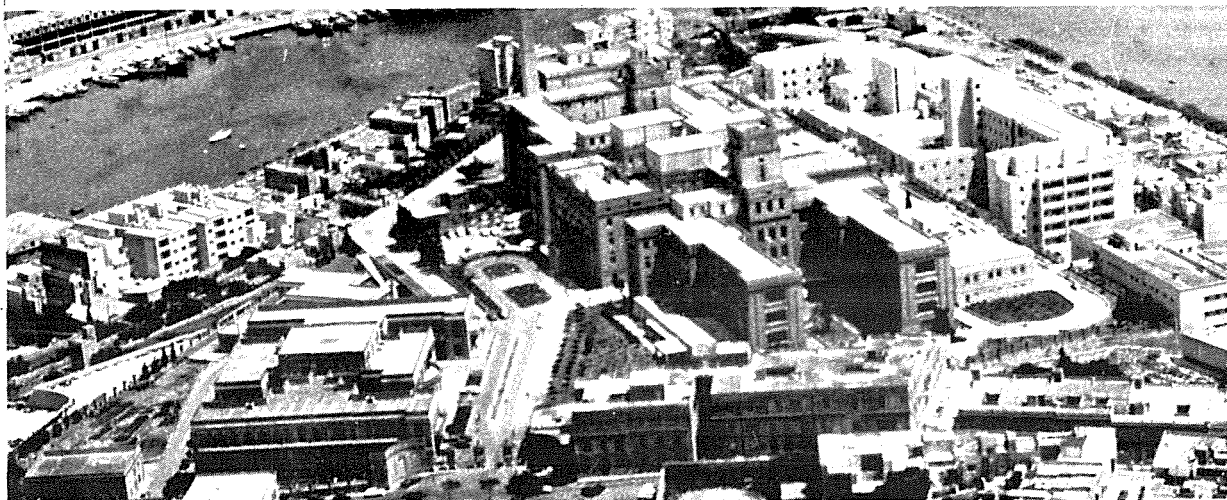
Chloroform remained the anaesthetic of choice until the beginning of the present century, when it was being administered by one or other of the four Resident Medical Officers of the Central Hospital.

In 1910, Dr. Peter Paul Debono, later Professor of Surgery at our University for twenty-five years (1926–51), qualified medical doctor at our university and proceeded immediately to England for post-graduate studies. Among the hospitals which he attended was the West London Hospital where he followed a course in anaesthesia. Here he became familiar with the administration of

ether, nitrous oxide and spinal anaesthesia. On his return to Malta in 1911 he began to use closed ether with the Clover apparatus; open ether and premedication with morphia and atropine; and nitrous oxide. On one occasion he improvised an apparatus for giving gas and oxygen. Gas was difficult to obtain in those days and Debono records a case when the supply of gas run out before the operation was completed.

The outbreak of the First World War provided him with an opportunity to widen his experience when he worked as anaesthetist at the British Royal Naval Hospital at Bighi during the Dardanelles campaign. At Bighi he came under the influence of Dr. Silk, of Silk's inhaler, Senior Anaesthetist at King's College Hospital. It was at this naval hospital and at this period that he began to use spinal anaesthesia which he later introduced into civilian practice.<sup>9</sup>

It was at the end of the First World War that the post of anaesthetist was created at the Central Hospital on the recommendation of the eminent surgeon Colonel Sir Charles Ballance and of other British surgeons who were in Malta at the time. The first to fill the post was Dr. Emanuel Vella (1885–1925) who was appointed on the 20th June 1919. During the war he saw service in the British military hospitals of Malta and was anaesthetist to Sir



Aerial view of St. Luke's Hospital, Malta. The out-patient block, St. Luke's Hospital and the new Karen Grech Hospital and the Medical School are seen.

Charles Ballance. According to the terms of his appointment he was required to give occasionally, "a voluntary course of theoretical and practical instruction in the administration of anaesthesia to graduates".

On the 22nd May 1922 Vella was succeeded by Dr. George Busuttill, who since June 1915 had been a Civilian Surgeon attached to the British Royal Army Medical Corps and anaesthetist to the Cottonera and the Mtarfa Hospitals. At this period anaesthesia was administered by the "Rag and Bottle" method with a chloroform and ether mixture dropped on a Schimmelbusch mask. Induction was not always smooth and comfortable for the patient and Busuttill's successor recalls that patients were held down forcibly on the operating table by one or more nurses during induction and that many a struggle developed when dealing with the hardier country type of patient.<sup>10</sup>

In Busuttill's time a course of twelve lectures with practical work in anaesthesia was announced for graduates and medical students in February 1924.<sup>11</sup>

Dr. George Busuttill retired in July 1929 and was succeeded by Dr. Richard Casolani who in the following month went to specialise at St. Bartholomew's Hospital. On his return to Malta he set himself to apply what he had learned in London at the Central Hospital by promoting the use of Boyle's gas and oxygen apparatus and introducing intranasal anaesthesia. He left in April 1932 to join the Royal Malta Artillery as Surgeon Lieutenant

but continued to exercise his specialty with the British Royal Army Medical Corps and later also at the British Naval Hospital at Bighi. He retired completely from professional activities in 1969 at the age of sixty-seven years.

Dr. Richard Casolani was followed in the post of anaesthetist at the Central Hospital by Dr. Edward Critien on the 15th July 1932 with the title of Government Anaesthetist and Demonstrator in Anaesthesia in the University.<sup>12</sup> He received his training at St. Bartholomew's Hospital and other London Hospitals.<sup>13</sup>

His successor in 1945 was Dr. Charles Podesta FFARCS. The first muscle relaxant – curare – came on the scene during his time and he introduced it in Malta in 1948.<sup>14</sup>

In the meantime, by 1947, two other anaesthetists were on the hospital staff – Dr. Joseph Psaila FFARC and Dr. Joseph Darmanin F.Int.College of Surgeons. During their tenure of office all the modern technique, anaesthetic drugs and muscle relaxants were utilized in Malta. These three specialists – all of whom received their post-graduate training and experience in the United Kingdom – retired from government service within recent memory i.e. in 1972, 1974 and 1970 respectively.<sup>15</sup>

This short survey of the story of anaesthesia in Malta shows that the beginnings and evolution of this specialty occurred during our political connection with Great Britain. It is understandable, therefore, why anaesthesia in our island reflects the

influences and trends of progress registered in the United Kingdom from 1847 onwards – a stretch of time of one hundred and thirty five years.

At this point we take leave of the pioneers and the veterans to usher in the contemporary period of anaesthesia in Malta which is so ably represented by the many members of anaesthetic staff at St. Luke's Hospital today. They should feel justly proud of having set up the Association of Anaesthesiologists of Malta whose foundation we are celebrating today. Their thorough professional formation and sound experience is a guarantee that they will all fill their posts with distinction and dedication and will endeavour to maintain the highest and traditional standards of scientific learning and techniques in their specialty and will make the furtherance of anaesthesia in Malta the primary objective of their professional life.

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