BIBLIOGRAPHY OF THE HISTORY OF ANAESTHESIA IN CANADA: PRELIMINARY CHECKLIST

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THE HISTORY OF SURGICAL ANAESTHESIA has provided a special fascination for medical historians. The dramatic beginnings 122 years ago, coupled with the violent controversy over credit for the discovery, probably explain much of the interest. It is still possible to provoke bitter argument by supporting the cause of Morton in the presence of an advocate for Long or for Wells.

In Canada, the history of anaesthesia reveals less contention. But the story is an intriguing one, a tale not yet fully told. In the twentieth century, in particular, practice and research in this country has helped advance the science of anaesthesia throughout the world.

Much of the difficulty involved in preparing historical studies about any field of medicine is related to problems of locating relevant material previously published. My aim, in this bibliographical checklist, is to identify and categorize a significant number of references, in the periodical literature, to the history of Canadian anaesthesia. Anyone pursuing studies in this field would, of course, also consult the few texts available, such as J. J. Heagerty's *Four Centuries of Medical History of Canada* (1928), William Canniff's *The Medical Profession in Upper Canada, 1783–1850* (1894), and *One Hundred Years of Medicine in Canada (1867–1967)*, recently published by H. E. MacDermot. This listing will inevitably be incomplete.†

THE BEGINNINGS

A-1 **Osborne, H. G.** Samuel Tilley Gove (1813–1897). Calgary Association Clinic Historical Bulletin. *12*: 31–38 (1947).

Gove was born at Gagetown, N.B. At the age of 14 he was apprenticed to a Dr. Cook, of Saint John. Two years later he went alone to England, to study at Guy's. Between 1831 and 1833 he went to Scotland to learn hypnotism. He began practice in 1833, at Gagetown, N.B. He moved to St. Andrews in 1839, and practised there 58 years. The author provides lists of medicines, instruments, fees, etc. "Gove's popularity as a doctor grew rapidly . . . because he offered something no competitor could–blessed relief from pain. His knowledge of hypnotism alone brought him lucrative surgery, and stood him in good stead until the advent of anaesthesia. We know that he used it in obstetrics too. . . ."

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†I would appreciate receiving information about any references which are omitted from this text.

A-2 Editorial: Inhalation of Sulphuric Ether Vapour. Brit. Am. J. Med. Phys. Sc. 2: 304–305 (March 1847).

During the winter of 1846–1847, when the news from Boston was spreading through the civilized world, Canada's only medical journal was the British American Journal of Medical and Physical Science. In this periodical, edited by Archibald Hall and Robert Macdonnell of Montreal, the first mention of anaesthesia seems to have appeared in January, 1847. Here the editors copied from a Philadelphia journal a short item mostly devoted to criticizing Morton for patenting his discovery, and enjoining physicians not to be "seduced . . . into the quagmire of quackery by this will-o'-the-wisp." In the March issue appears a long article reprinted from the Dublin Medical Press, and in that issue also is the first original writing on the subject in a Canadian journal—a full-page editorial which identifies the "secret nostrum" as sulphuric ether, criticizes Morton for his patent and Bigelow for supporting him, cautions users about untoward effects, yet generally supports the usefulness of ether in alleviating pain.

A-3 Editorial note: Employment of Sulphuric Ether Vapor in Montreal, Quebec and Sherbrooke. Brit. Am. J. Med. Phys. Sc. 2: 338 (April 1847).

"This agent has been employed in Quebec, this city, and Sherbrooke; but not with uniform success. In Quebec, Dr. James Douglass lately amputated the toes of a man, who had been previously narcotized by the inhalation of the vapor. More lately, in this city, Dr. Nelson removed a tumor from the thigh of a woman under similar circumstances of narcotism. The removal of a leg by Dr. Worthington, of Sherbrooke, was effected under a like state of insensibility from the same cause. In these three instances the successful use of the ether vapor was complete. At the Montreal General Hospital, circumstances lately demanded the amputation of the leg of a patient. Several protracted attempts were made, and at different intervals, under Dr. Campbell to induce the narcotic effects of the ether, but without success; the leg was afterwards removed in the ordinary way. As the man had been of very intemperate habits, it becomes a question how far these habits may have influenced the susceptibility of the patient to the influence of the ether."

A-4 **Nelson, Horace.** Experiments with the Sulphuric Ether Vapour. Brit. Am. J. Med. Phys. Sc. 3: 34–36 (June 1847).

This communication can, I think, represent the beginning of the scientific study of anaesthesia in Canada. Nelson reports his experiments here calmly and dispassionately; a brief quotation will serve to show the tone, and perhaps partially explain why the anti-vivisection movement achieved such a vigorous growth during the nineteenth century: "The dog was the chosen victim, and Jones administered the vapour. In the space of about four minutes, the animal was in a state of profound insensibility. I commenced my operations by cutting off a portion of one ear, which was followed by the removal of the whole organ, the dog, to all appearance, lying as if dead, no one confining him to the table. Next an incision was made from the hind leg, following the direction of the vertebral column, and continued as far as the middle of the neck, and with the greatest facility I removed the skin from that half of the body. I then proceeded to the amputation of one of the fore legs; but before completing the operation, was called to visit a patient. On my return, more than one half hour having elapsed, re-action had taken place, and I found the dog perfectly recovered,

expressing by his deep groans, the severity of his sufferings. In this state, I cut off one portion of the remaining ear, but the result was far different; his violent efforts and cries giving every one present to understand, that he was no more sleeping. To put an end to his sufferings, he was instantly strangled."

A-5 **Crawford, J.** Contributions to Clinical Medicine. Brit. Am. J. Med. Phys. Sc. 3: 199–201 (December 1847).

Crawford, Lecturer on Clinical Medicine at McGill College, used ether as part of his unsuccessful treatment of traumatic tetanus in a 7-year-old boy. In this report the author also outlines his successful use of ether to produce anaesthesia in a boy requiring amputation of a leg.

A-6 **Colbeck, W. Kirk.** The First Record of an Anaesthetic in Ontario. Canad. M.A.J. 32: 84–85 (1935).

In Upper Canada the first known record of anaesthesia is the use of chloroform by Dr. Duncan Campbell on May 31, 1848. The source article (Niagara Mail, June 7, 1848) is quoted in full. There is no record of the anaesthetist's name.

A-7 **Holmes, A. F.** Employment of Chloroform. Brit. Am. J. Med. Phys. Sc. 3: 263–264 (February 1848).

A letter dated January 25, 1848: "The following is, so far as I know, the first example of the employment of chloroform in this Province. . . ." Holmes procured the chloroform from Messrs. S. J. Lyman & Co., and used it in lessening the pains of childbirth. "I was called at 3 o'clock this morning . . ." i.e., January 25, 1848.

A-8 **Johnston, James B.** Chloroform in Midwifery. Brit. Am. J. Med. Phys. Sc. 3: 324–325 (April 1848).

"The provincial press has of late teemed with cases of the application of chloroform in surgical operations, but as yet few have been reported in Canada of its employment in obstetric practice. Having made use of this new anaesthetic agent in several cases of parturition with marked success, I am induced to detail the particulars of some of them."

Johnston reports his use of chloroform, with apparent success, in three instances.

A-9 **Martin, J.** Chloroform at the Marine Hospital. Brit. Am. J. Med. Phys. Sc. 3: 325–326 (April 1848).

See item A-10.

A-10 **Jacques, André.** 325th Anniversary: Anesthesia, Past & Present. Anesth. & Analg. 45: 15–20 (January–February 1966).

This account is a historical note on the Hôtel-Dieu of Quebec, and particularly on the use of anaesthesia in that hospital. Dr. James Sewell (1837–1883) administered chloroform to a patient on February 3, 1848. The patient, Francis McNamara, had a great toe removed. Although Jacques claims this as "the use of chloroform for the first time in Canada," the claim does not hold up. See, for example items A-7 and A-11.

A-11 **Worthington, E. D.** Cases of Chloroform. Brit. Am. J. Med. Phys. Sc. *3*: 326–327 (April 1848).

Actually a letter dated February 10, 1848, reporting the author's use of chloroform on January 24, 1848, to examine a fractured hip in a 70-year-old lady; and on January 25, 1848, for removal of a tumour of the head.

A-12 Editorial: The Late Doctor Worthington. The Medical Age (Detroit). *13*: 177–179 (March 25, 1895).

Worthington (1820–1895) was "the first surgeon in Canada to perform a capital operation under an anaesthetic—the first to use both ether and chloroform." He was apprenticed to James Douglas for five years, and completed his medical training at Edinburgh University, where he received the gold medal.

A-13 **MacKenzie, K. A.** Early Adventures with Chloroform in Nova Scotia. Canad. M.A.J. *14*: 254–255 (March 1924).

Chloroform was in use early in 1848; prepared by Pictou chemist J. D. B. Fraser, it was used by Dr. (later Senator) W. J. Almon in surgery early in February, and in midwifery on March 22, 1848.

A-14 **Warren, John C.** Effects of Chloroform and of Strong Chloric Ether, as Narcotic Agents. Boston: William D. Ticknor & Co. (1849), p. 4.

Warren begins his book by citing a letter he received "from a distinguished person in Canada." This unidentified person is quoted by saying: ". . . it does not seem to me that, in this vicinity, the medical profession are availing themselves generally and with confidence of the aid of the one agent or the other, which I am at a loss to account for. . . ."

A-15 **De Sola, Rev. Abraham.** Critical Examination of Genesis III. 16. Having Reference to the Employment of Anesthetics in Cases of Labour. Brit. Am. J. Med. Phys. Sc. *5*: 227–229 (January); *5*: 259–262 (February); *5*: 290–293 (March 1850).

This essay, solicited by the editor, gives the author's detailed rendering of the original Hebrew of Genesis chapter III, verse 16. De Sola was lecturer on Hebrew Language and Literature, University of McGill College. The proper translation of the verse, he suggests, is this: "I will greatly multiply thy *travail* and thy conception: with *travail* shalt thou bring forth children." The document is a fascinating, if somewhat tedious, illustration of this deadly serious debate 120 years ago.

A-16 **Hingston, William Hales.** A Few Observations on Chloroform. Med. Chronical Montreal Month. J. *1*: 175–176 (1854).

Hingston contests the opinion of a French author that electricity is invariably successful in resuscitating patients after "over doses of chloroform." Nothing, Hingston believes, is superior in effectiveness to artificial respiration.

A-17 **Graham, Joseph.** First Death from Chloroform at Toronto General Hospital. Canad. J. Med. Surg. *29*: 206–212 (1911).

Reprint of an account published in The Evening Leader, Toronto, January 15, 1863. See also item A-18.

A-18 **Roland, Charles G.** The First Death from Chloroform at the Toronto General Hospital. Canad. Anaesth. Soc. J. *11*: 437–439 (July 1964).

A commentary on item A-17, with biographical information about the principals involved, as well as some background data on the status of chloroform anaesthesia in the middle years of the nineteenth century.

A-19 Editorial. Canad. Lancet. *1*: 5 (March 14, 1863).

"It becomes our painful duty to record another death from the inhalation of chloroform, which has occurred in the Montreal General Hospital." The patient was a woman undergoing haemorrhoidectomy. "This is the second accident of the kind in this institution, within two years. We [W. E. Bowman] were present at the first in August, 1861."

The editor, Bowman, goes on to criticize the surgeon in this second instance for not having available a magneto-electrical machine, "one of our most powerful means of exciting the heart and diaphragm into action."

A-20 "To Correspondents." Canad. Lancet. *1*: 8 (March 14, 1863).

"Chloroform–The surgeons in the Montreal General Hospital always measure the chloroform, giving one fluid drachm, at first, and repeating it in obstinate cases; otherwise, they continue with half-drachm inhalations, until the patient is fully under its influence. In the Hotel Dieu Hospital the chloroform is not measured, but from one to two drachms is guessed at, at first, and a less quantity employed afterwards. Both hospitals use a folded towel pinned together in the form of a cone."

A-21 **Hingston, William H.** Address on Surgery. Canad. Lancet. *6*: 47–56 (1874).

This was the first annual address on surgery to the CMA, a felicitous performance ranging over Indian and early settler medicine to a résumé of the significant advances in surgery in the 19th century. "We, in Canada, follow the practice of the British in the use of chloroform in preference to the safer anaesthetic–ether."

Biography: The Maritimes

B-1 Obituary: Dr. Frederick Lessel. Canad. M.A.J. 53: 513–514 (November 1945).

Lessel (1881–1945) graduated from Dalhousie in 1903. After postgraduate work in London he returned to Halifax, specializing in anaesthesia for more than 30 years.

B-2 **H. B. A[ttlee].** Obituary and Appreciation: Dr. Walter Lawson Muir. Canad. M.A.J. 77: 65–66 (July 1, 1957).

Muir (1880–1957) graduated from McGill in 1907. He practiced in Nova Scotia all his life, switching from general practice to anaesthesia after World War I. He was head of the Department of Anaesthesia at the Victoria General Hospital, 1927–1953.

"He belonged to a simpler age of anaesthesia than the present. His tools

were a mask, a tube of ethyl chloride, and a can of ether, yet the variations he could play with these gave a beautiful relaxation in days when the surgeon struggled not only with the disease but the bowels."

Biography: Quebec

C-1 **H. E. M[acdermot].** Obituary and Appreciation: Dr. William Boyman Howell. Canad. M.A.J. *57*: 177–178 (August 1947).

Born in Montreal in 1874, Howell graduated from McGill in 1896. In 1918 he received an appointment as the first full-time anaesthetist to the Royal Victoria Hospital. He retired in 1937. In 1928 he married Jean Cameron, Medical Librarian at McGill. Howell wrote a history of medicine in Canada (Clio Medica Series) in 1933; and *F. J. Shepherd, Surgeon, His Life and Times*, in 1934.

C-2 Obituary: Francis Willard Nagle, M.D. Canad. M.A.J. *8*: 166–167 (February 1918).

Nagle was born at Ferguson Falls, Ontario, in 1883; he graduated from McGill in 1908. The chief anaesthetist of the Royal Victoria Hospital, he was Wesley Bourne's mentor. "He was a past-master in the administration of nitrous oxide and oxygen as an anaesthetic—an unusual accomplishment even among experts."

C-3 **Griffith, H. R.** Obituary and Appreciation: Wesley Bourne. Canad. M.A.J. 92: 895–896 (April 17, 1965).

Bourne (1886–1965) graduated from McGill in 1911. He began to study surgery at the Royal Victoria Hospital, but someone was needed to "pour ether." Bourne got the assignment, and never returned to surgery. He was a prolific author and a fine teacher who played a major role in inducing McGill to begin the systematic teaching of anaesthesia in 1945. Bourne was the first secretary (1920) of the Canadian Society of Anaesthetists (an early precursor of the present Society) and was the first foreigner to serve (1942) as president of the American Society of Anesthesiologists.

(The Appreciation also appeared in Canad. Anaesth. Soc. J. *12*: 315–317 (May 1965).)

C-4 **Bourne, Wesley.** Anaesthesia for the Republic of Plato. Yale J. Biol. Med. *11*: 149–160 (December 1938).

A typical example of Bourne's writing—scientifically sound, well-written, with an approach away from the standard pattern. This is written in the first person, full of personal experience: "I may say, from more than a little experience, that the repeated administration of morphine and scopolamine, sufficient to obtund mental appreciation, has yet to cause more than is wished for."

C-5 **R. F.** Dr. Charles C. Stewart: An Appreciation. Canad. M.A.J. *78*: 551 (April 1, 1958).

Stewart (1887–1958) was director of the Department of Anaesthesia, Montreal General Hospital, from 1925 (four years after his graduation from McGill) until 1953.

C-6 Obituary: Charles Stewart. Canad. Anaesth. Soc. J. *5*: 213 (April 1958).

While a medical student Stewart enlisted in the ranks of No. 3 McGill General Hospital. In France he became a corporal and was taught to pour ether. He soon was spending his full time as an anaesthetist, a career he continued after his graduation from McGill in 1921.

C-7 Obituary: Dr. Romeo Rochette. Canad. Anaesth. Soc. J. *6*: 169–170 (April 1959).

Rochette (1895–1958) received his M.D. from the University of Montreal in 1922. In 1926, while a resident at the Hôtel-Dieu, "a place as an assistant in anaesthesia was offered him. At that time specialization in anaesthesia was not well enough recognized to offer full occupation. . . . Dr. Charles Larocque, who had started anaesthesia as a specialty in 1907 at the Hotel Dieu Hospital . . . soon found that he needed more help." He engaged Rochette, who became Chief-of-Service in 1934.

C-8 Obituary: Dr. F. Arthur H. Wilkinson. Canad. M.A.J. *80*: 921–922 (June 1, 1959). (Port.)

A prominent anaesthetist in Montreal, Wilkinson (1906–1959) became the first Canadian to be granted the diploma in anaesthesia of the Royal College of Surgeons in England. He also became, in 1944, the first Anaesthetist-in-Chief for the newly formed full hospital department of anaesthesia of the Royal Victoria Hospital.

C-9 **Noble, A. B.** Obituary: Frederick Arthur Harvey Wilkinson. Canad. Anaesth. Soc. J. *6*: 292–293 (July 1959). (Port.)

Biography: Ontario

D-1 **F. J. S.** [Obituary:] Robert A. Stevenson, M.D. Canad. M.A.J. *10*: 207–208 (February 1920).

Stevenson received his M.D. from McGill in 1871; ". . . of the time of Osler, and one of his oldest friends." He did general practice in Strathroy and then in Toronto. He also became a skilled anaesthetist. His mother was a direct descendant of Colonel Butler of Butler's Rangers.

D-2 **Clinedinst, Catherine Ames.** [Obituary:] Dr. Samuel Johnston. Canad. M.A.J. *56*: 694 (June 1947).

Johnston (1868–1947) graduated from Trinity University in 1901. While in general practice he "became adept in the giving of anaesthetics, and, in 1910, he went abroad to study this art. . . . On his return to Toronto he devoted all his attention to the teaching and practice of anaesthesia."

D-3 **Johnston, Samuel.** The Growth of the Specialty of Anaesthesia in Canada. Canad. M.A.J. *17*: 163–165 (February 1927). (Also Canad. J. Med. Surg. *63*: 72–76 (March 1928).)

"I know I was the first physician in Canada to give up general practice and go into the specialty of anaesthesia." Johnston began administering anaesthetics

while a houseman in 1902–1903. "I am afraid the historical beginning of the growth of anaesthesia as a specialty in Canada will have to read very much like an autobiography." Johnston headed the first anaesthetic department of the Toronto General Hospital.

D-4 Obituary: Dr. T. R. Hanley. Canad. M.A.J. *17*: 1395 (November 1927). (Port.)

Hanley graduated in medicine from the University of Toronto in 1911. He "developed into one of our most expert anaesthetists." Hanley was also a fine athlete, a member of championship lacrosse teams.

D-5 A Belated Tribute to a Beloved Anesthetist—T. R. Hanley, M.B. Anesth. & Analg. *7*: 129–130 (May–June 1928).

D-6 Obituary: Dr. Kenneth McKellor Heard. Canad. M.A.J. *58*: 627 (June 1948).

"Dr. Heard was the first to introduce intravenous pentothal anaesthesia into Canada and was also an authority on spinal anaesthesia. In 1941 he organized the Canadian Anaesthetists' Society, serving as secretary and president.

D-7 Obituary: Dr. Charles Ivan Junkin, An Appreciation. Canad. Anaesth. Soc. J. *9*: 82–83 (January 1962).

Born in Ontario, Junkin graduated from the University of Toronto in 1924, after serving overseas during World War I. From 1927 to 1945 he combined anaesthesia and general practice, finally giving up the latter in 1945 to concentrate on paediatric anaesthesia.

D-8 Obituary: William MacPherson Cody. Canad. Anaesth. Soc. J. *5*: 362 (July 1958).

Cody (1887–1958) graduated from the University of Toronto in 1911. "In 1917 he was the first anaesthetist appointed to the Hamilton General Hospital, and in 1919 he gave up general practice to specialize in anaesthesia."

Biography: Western Canada

E-1 **Webster, W.** Notes on the Development of Anaesthesia in Western Canada. Canad. M.A.J. *17*: 727–728 (June 1927).

". . . [A]s early as 1899 we find recorded in the minutes of the Winnipeg General Hospital the appointment of Doctor Hutton as honorary anaesthetist." Hutton served from 1899 to 1900, a Dr. Chestnut from 1901 to 1902, and the author from that date on. There was no teaching of anaesthesia at the Manitoba Medical College until 1904.

E-2 Obituary (**Ross Mitchell**) and Appreciation (**E. W. Montgomery** and **H. P. H. Galloway**): Dr. William Webster. Canad. M.A.J. *31*: 691 (December 1934). (Port.)

"The dean of Western Canadian anaesthetists," Webster was born in Manchester in 1865 and graduated from the University of Manitoba in 1895. "He

began as a GP but soon became the first specialist in anaesthetics west of the great lakes," serving as anaesthetist to the Winnipeg General Hospital from 1902 to 1934. In 1922 Webster was President of the Canadian Society of Anaesthetists. He wrote *The Science and Art of Anaesthesia*, published by C. V. Mosby, 1924, and *Anaesthesia for Nurses*, 1925.

E-3 **Aikenhead, D. C.** William Webster, M.D., Anesthetist: An Appreciation. Anesth. & Analg. *16*: 312–317 (November–December 1937).

E-4 **Minuck, M.** Recent Advances in Anaesthesia in Manitoba. Man. Med. Rev. *47*: 146–148 (March 1967).

Biographical information about William Webster and other pioneers. The survey is a fine brief summary of the history of anaesthesia in Manitoba.

E-5 **H. B. G.** Beverly Charles Leech. Canad. Anaesth. Soc. J. *7*: 351–352 (July 1960). (Port.)

Born in Brandon, Leech (1898–1960) graduated from McGill in 1925. Between 1929 and 1956 he was Director of Anaesthesia at the Regina General Hospital.

E-6 **H. B. G.** Doctor David Dawson Freeze. Canad. Anaesth. Soc. J. *9*: 560 (November 1962).

After graduating from McGill in 1912, Freeze (1885–1962) practised psychiatry for several years. He served with distinction overseas. After the war he was on the anaesthetic staff of the Royal Victoria Hospital briefly, returning to Vancouver in 1919 as Director of Anaesthesia at the Vancouver General Hospital, a post he held for 28 years.

CYCLOPROPANE

F-1 **Lucas, G. H. W.** & **Henderson, V. E.** A New Anaesthetic Gas: Cyclopropane. Canad. M.A.J. *21*: 173–175 (August 1929).

F-2 **Henderson, V. E.** & **Lucas, G. H. W.** Cyclopropane: A New Anaesthetic. Anesth. & Analg. *9*: 1–6 (January–February 1930).

F-3 **Griffith, Harold R.** Cyclopropane: A Revolutionary Anaesthetic Agent. Canad. M.A.J. *36*: 496–500 (May 1937).

A well-written and interesting article. "On October 30, 1933, I had the privilege of administering the first cyclopropane in Canada. Since then I have personally administered the gas over 2,500 times." Griffith means the first cyclopropane *to a patient*. Both Henderson and Lucas had taken the gas during their experiments (see F-5), and Brown (see F-5) had anaesthetized Sir Frederick Banting at a demonstration before several physicians.

F-4 Obituary: Velyien Ewart Henderson, M.A., M.B., F.R.S. (Canada), F.R.C.P.(C). Canad. M.A.J. 53: 408 (October 1945).

Born in Cobourg in 1877, Henderson received an M.B. from the University of Toronto in 1902. He was a pharmacologist at the University of Toronto from 1904 till his death. "The widely used anaesthetic agent, cyclopropane, has made his name famous the world over."

F-5 **Lucas, G. H. W.** The Discovery and Pharmacology of Cyclopropane. Canad. Anaesth. Soc. J. 7: 237–256 (July 1960).

This excellent study relates the history not only of the discovery of cyclopropane, but indeed of all research in anaesthesia in Toronto's pharmacology department after 1927. Lucas discusses his own contributions, as well as those of V. E. Henderson, W. Easson Brown (including his work with ethylene), R. M. Waters, and Harold Griffith.

F-6 **Griffith, Harold R.** The Early Clinical Use of Cyclopropane. Anesth. & Analg. *40*: 28–31 (January–February 1961).

F-7 **Lucas, George H. W.** The Discovery of Cyclopropane. Anesth. & Analg. *40*: 15–27 (January–February 1961).

Somewhat repetitious of item F-5, but not identical.

Curare

G-1 **Griffith, Harold R.** The Use of Curare in Anaesthesia and for Other Clinical Purposes. Canad. M.A.J. *50*: 144–147 (February 1944).

G-2 **Griffith, Harold R.** The Evolution of the Use of Curare in Anesthesiology. Ann. New York Acad. Sc. *54*: 493–497 (1951).

The drug was first administered to a patient as an adjunct to anaesthesia on January 23, 1942, at the Homeopathic Hospital of Montreal.

Changing Procedures, Changing Philosophy

H-1 **Cullen, Thomas S.** The House Surgeons of the Toronto General Hospital, 1890–1891. Canad. J. Med. & Surg. 52: 66 (1922).

The roster includes L. F. Barker and T. S. Cullen. The author also gives anecdotes of hospital practice in those days: "Now and again a patient would take chloroform badly, and sometimes would stop breathing. On such occasions if it were during the winter, Dr. [C.] O'Reilly would rush out and look for a large icicle. This would be inserted into the rectum and in some instances it was remarkable to see how quickly the patient responded to the stimulus."

This treatment is *not* one of Canada's contributions to the art of resuscitation. The Lancet, on August 2, 1873, noted that a Dr. Baillee, writing in an Italian journal, recommended the insertion of ice in the rectum for "chloroform intoxication."

H-2 **O'Reilly, Charles.** An Anaesthetic Chart. Canad. Lancet. *34*: 636–637 (August 1901).

The chart, reproduced in full below, appears almost ludicrous to us now, particularly when we realize that only the final one-quarter represents the operating-room chart. Nevertheless, it is gratifying to see space allotted for preoperative examination of the patient, a concept still not universal. Not until two years after this publication did Cushing publish his influential paper, On Routine Determinations of Arterial Tension in Operating Room and Clinic (Boston Med. & Surg. J. *148*: 250–256, March 5, 1903).

AN ANAESTHETIC CHART.

The following chart arranged by Dr. Charles O'Reilly, of the Toronto General Hospital, has been widely adopted in Hospital practice.

ANAESTHETIC REQUIREMENTS.

Instruments.

Tongue Forceps.
Mouth Gag.
Tongue Depressor.
Sponge and Holder.
Tracheotomy Tube.
Tracheotomy Knife.
Feathers, for tube.
Hypodermic Syringes.
Oesophageal Forceps.
Davidson Syringe.

Miscellaneous.

Wax Candle and Matches.
Large Fan.
Blocks or Bricks to elevate table.
Conical Jaw Opener.
Battery.

Restoratives.

Liq. Amm. Fort.
Spts. Amm. Arom.
Brandy and Whiskey.
Liq. Strychnin. (dose 5-10 minims.)
Ether.
Tr. Digitalis.
Sol. Green Tea
Amyl. Nitrat. (Pearls.)
Oxygen Gas.
Nitro-glycerine $\frac{1}{100}$ gr.

Miscellaneous.

Towels for Friction.
Hot water Bottles, Cold Water.
Ice, for rectum.
Forced Respiration Apparatus.
Saline Solution, 3i. to 0i.

Form to be Filled in Before the Administration of an Anaesthetic.

Name ..... Disease ..... Age ..... Sex.....
Birthplace ..... Occupation ..... Ward No. .....
House Surgeon ..... Date of Admission ..... Date of
Discharge ..... Under care of ..... Report taken by .....
HABITS : Alcohol .....DISEASES : Epilepsy .....
Opium ..... Apoplexy .....
Cocaine ..... Bright's Disease .....
Other Drugs ..... Other Diseases .....

Patients Condition.

Pulse before ..... during ..... after ..... Circulation .....
Heart ..... Lungs ..... Nervous System .....
Urinary Analysis—Sp. Gr. ..... Albumen .....
Reaction ..... Sugar .....
Anaesthetic commenced at ..... Discontinued at .....
Anaesthetic used ..... Amount used .....
State of Stomach during operation .....
Return to consciousness at .....
Date ..... Administrator .....M.D.

General Remarks :

H-3 **Monahan, Richard.** Anaesthesia—The Psychological Bugbear of Surgery. Montreal Med. J. 39: 686–691 (October 1910).

The author reports Osler's observation that most patients show little sign of distress at the moment of death. In contrast, Monahan reports, "the overwhelming majority" of patients show great apprehension before receiving an anaesthetic.

"Nowadays the patient allows the knife to enter but slightly into his pre-operative ideas; the sum-total of any surgical procedure is expressed by five letters which loom up in his mind as large as the topmost letters of Snellen's Test Types and make up the appalling word 'ETHER.' "

He ends with an appeal for improved and more consistent training in anaesthetic techniques for medical students.

H-4 **Primrose, A.** An Address on the Surgeon and the Anaesthetist. Canad. M.A.J. *17*: 886–889 (August 1927).

An appeal by a distinguished surgeon for better training in anaesthesia, more use of the trained anaesthetist, and for "the anaesthetist as well as the surgeon [to] see the patient before operation. . . ."

Miscellaneous

I-1 **Griffith, Harold R.** Aspects of Anaesthesia. Canad. M.A.J. 65: 523–527 (December 1951).

Informal résumé of progress in anaesthesia. "I would hate to have to re-enact the battles I have had with patients who did not appreciate the way they were being smothered." He comments that in the Canadian medical schools "the first independent Department of Anaesthesia was at Laval; then in 1946 McGill, with Wesley Bourne [see C-3] as the first Professor."

I-2 **Shields, H. J.** The History of Anaesthesia in Canada. Canad. Anaesth. Soc. J. 2: 301–307 (October 1955).

A good brief history, although by no means exhaustive.

I-3 **Griffith, H. R.** The Boundless Realm of Anaesthesiology. Canad. M.A.J. 82: 859–865 (April 23, 1960).

Personal reminiscences of the growth of anaesthesiology in Canada, especially Montreal. The author published the first clinical report of the use of curare in anesthesia, 1942.

I-4 **Griffith, Harold R.** Some Canadian Pioneers in Anaesthesia. Canad. Anaesth. Soc. J. *11*: 557–566 (November 1964).

I-5 **Duffy, John.** Anglo-American Reactions to Obstetrical Anesthesia. Bull. Hist. Med. 38: 32–44 (January–February 1964).

This is a fine summary of this subject, although lacking specific reference to Canada.

I-6 **Gordon, R. A.** Editorial: A Report of Canadian Anaesthesia and the Canadian Anaesthetists' Society. Canad. Anaesth. Soc. J. 3: 182–186 (July 1956).

". . . [T]here were in Canada before 1940 not more than half a dozen anaesthetists who were able, economically, to confine their private practice to Anaesthesia. It is my purpose today to draw your attentian to the great change which has come over the land since that time, to discuss the factors which have produced this change, and to underscore lightly the part played by the Canadian Anaesthetists' Society in this transition."