

The Great Canadian Peritonitis Debate — 1844-47

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In 1844, a highly publicized death in Montreal was investigated by the courts. The two physicians involved gave conflicting opinions. The attending doctor, Wolfred Nelson, an anglophone "patriote" politician and later the first elected mayor of Montreal, thought his patient had died of peritonitis secondary to bayonet wounds. Andrew Holmes, Dean of the McGill Faculty of Medicine, who had witnessed the autopsy, said there was no pathological evidence for such a diagnosis. Widely reported in the lay press, their public disagreement spilled over into the medical literature where it exploded into a protracted three-year polemic occupying many pages of early Canadian medical journalism in both French and English. Another death from appendicitis in 1847 added fuel to the raging debate. Peritonitis was a relatively new diagnosis tied to the new concept of tissue-specific lesions. Its relationship to appendicitis had not yet been clearly described. Both physicians cited medical authorities, but each accused the other of misquoting and the dialogue often descended to the level of personal insult. The debate was ostensibly about the physical and pathological signs of peritonitis, but it was sparked by more than academic disagreement. Nelson and Holmes were at opposite poles of the political spectrum: they came from different medical backgrounds, practised different styles of medicine and were both involved in education for very different reasons. This controversy illustrates the extent to which these two prominent practitioners were aware of the history of a new disease as portrayed in contemporary literature and it illuminates the evolving role of the medical practitioner in mid-nineteenth century Canada.

En 1844, les tribunaux se sont penchés sur un cas de décès largement diffusé à Montréal. Les deux médecins impliqués donnèrent des opinions contradictoires. Wolfred Nelson, le docteur responsable, politicien « patriote » anglophone qui allait devenir le premier maire élu de Montréal, pensait que son client était mort de tétionite, suite à une blessure de baïonnette. Andrew Holmes, doyen de la faculté de médecine de l'Université McGill, présent à l'autopsie, déclara qu'il n'y avait pas de preuve pathologique d'un tel diagnostic. Le désaccord public des deux médecins, largement rapporté dans la presse juridique, se répandit dans la littérature médicale; il y éclata une polémique qui traîna pendant trois ans et occupa de nombreuses pages du journalisme médical canadien à ses débuts, en français comme en anglais. Un autre décès, consécutif à une appendicite en 1847, alimenta le débat qui faisait rage. Le diagnostic de la péritonite, relativement récent, était relié au nouveau concept de lésions des tissus spécifiques. Ses liens avec l'appendicite n'avaient pas encore été clairement décrits. Les deux médecins citaient des autorités médicales, mais s'accusaient mutuellement de citations erronées et souvent le dialogue dégénérait en insultes personnelles. Le débat portait manifestement sur les signes physiques et pathologiques de la péritonite, mais il fut allumé par plus qu'un simple différend académique. Nelson et Holmes étaient diamétralement opposés politiquement: et ils différaient tant du point de vue de leurs origines et de leurs pratiques médicales, que des raisons de leur implication dans l'enseignement. Cette controverse montre le degré de conscience de l'état des connaissances d'une nouvelle maladie, telle que décrite dans la littérature contemporaine, et il éclaire l'évolution du rôle du médecin au milieu du XIX^e siècle au Canada.

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In Montreal on April 17, 1844, Julien Champeau, a 28 year-old master bargeman, was bayoneted by a soldier. Three days later, he died. The injury occurred outside a polling station near the American Presbyterian Church. His widely publicized death contributed to a deterioration in the already tense relations of the French and the English and became a factor in the general election of that year. His funeral was a political statement. Even Champeau's autopsy attracted public attention because the attending doctor, Wolfred Nelson, did not agree with the findings of the coroner's witness, Andrew Holmes. At the coroner's inquest, Dr. Nelson maintained that his patient had suffered from peritonitis; Dr Holmes insisted there was no autopsy evidence for such a diagnosis. The courtroom dispute, which initially appeared in the popular press,¹ led to a three-year polemic in the neophyte medical journals of Canada. Their debate, ostensibly about the clinical and anatomical findings of peritonitis, illuminates not only the state of scientific knowledge, but also the evolving role of the medical practitioner in the mid-nineteenth century. It was inextricably linked, moreover, with the social, political and ethnic cleavages of Lower Canada.

In 1844, Wolfred Nelson (1791 or 1792-1863) had just returned from exile in Bermuda and the United States for his role as one of the most outspoken and militant of the "Patriotes" in the 1837-38 rebellion.² Born in Montreal, the son of Loyalist parents, he had began his medical studies at the age of fourteen, apprenticed to a British army surgeon. He was licensed in 1811. Originally a "hot Tory" he became sympathetic to the reformers during an army posting to the French community of St Denis on the Richelieu. In 1827, he won his first election to the legislative assembly for the riding of William-Henry, which included Sorel. From then on, his practice of medicine was intimately linked with agitation for social reform and in these convictions he was seconded by his brother, Robert Nelson (1793-1873).³ Wolfred married a French Canadian, Joseph-Charlotte Noyell and although he remained a Protestant, he raised his bilingual family of five sons and two daughters as Roman Catholics. He served on the Medical Board of Examiners in 1831. His genius for enterprise was limitless: in the 1830s he operated a prosperous distillery at Sorel with a medical colleague. Prominent in the political unrest from the mid-1830s, he was the Patriote leader at St Denis where the British were forced to retreat.⁴ This exploit earned him his sentence of exile in 1838. After several months in Bermuda, Nelson was allowed to move to Plattsburg, New York where, dauntless, he began a successful medical practice. At amnesty in 1842, Nelson returned to Montreal to resume his medical career and his quest

1. See esp. *Montreal Gazette*, 23 avril 1844; *La Minerve*, 18, 22, 25, 29 avril and 2 mai 1844.

2. Short biographies of Wolfred Nelson appear in Howard A. Kelly and Walter L. Burrage, eds, "Wolfred Nelson", *American Medical Biographies*, (Baltimore: N. Remington, 1920), p. 848; Wolfred Nelson, *Wolfred Nelson et son temps* (Montréal: Flambeau, 1946); John Beswarick Thompson, "Wolfred Nelson" in *Dictionary of Canadian Biography*, 9: 593-97. The Nelson family is mentioned in Wm. J. Farmer (1822-1911), "The Emigration" edited by TWH (1940) and Dorothea Wallace (1973) in "History of the Farmer Family", Public Archives of Canada (hereafter PAC), MG 24 I 120, p. 17. Nelson's father has been variously described as an English schoolmaster (Nelson), a naval officer and an employee of the Hudson's Bay Company (Farmer).

3. Robert Nelson was also a practising physician (army and Dartmouth, New Hampshire-trained), a politician and a rebel. In spite of their common interests, he felt he had been blamed for some of his brother's exploits. See Kelly and Burrage, eds, *Biographies*, p. 848; Mason Wade, *The French Canadians* (Toronto, London, and New York: MacMillan, 1968), p. 191.

4. For more on Nelson and his role in the social history of Québec see Fernand Ouellet, *Lower Canada, 1791-1840*, translated by Patricia Claxton (Toronto: McClelland and Stewart, 1980), pp. 275-327; Robert Rumilly, *Histoire de Montréal*, 5 vol. (Montréal, Fides, 1970), 2: 209 passim; Elinor Kyte Senior, *Redcoats and Patriotes. The rebellions in Lower Canada, 1837-1838* (Stittsville: Canadian War Museum Historical Publication no. 20, 1985); Mason Wade, *French Canadians*, p. 171 passim.

for social reform. Later, he would be active in the founding of the College of Physicians and Surgeons of Canada East, in the creation of a regional bank and in the activities of l'Association Jean-Baptiste, which he served as physician.

Why this quixotic anglophone adopted the Patriote cause has never been adequately explained. One contemporary description suggests that he seems to have had a ferocious appearance: "très grand, de forte carrure. D'abondants cheveux bruns frisés se prolongent sur les joues en favoris, qui lui font un collier de barbe. Avec de grands yeux noirs, des sourcils arqués en broussaille, il a quelque chose d'hirsute et de puissant."⁵ Nicknamed by his enemies "le loup rouge"⁶ for his impetuosity as much as for his red-hairy appearance and his name, he was also said to have been possessed of "a heart as tender as a child's, as excitable and romantic as a woman's."⁷ Yet, the seeming betrayal of his Loyalist roots had subtle overtones. He preferred to describe the 1837-38 trouble not as the product of racial or linguistic tension, but as the fruit of injustice and corruption.⁸ He publicly disagreed with Papineau on several occasions allowing their argument to spill into the popular press;⁹ he opposed complete severance of ties with Britain¹⁰ and supported the construction of an Anglican cathedral in Montreal;¹¹ he named his first son, Horace, surely not an accidental reference to the famous English admiral, Horatio Nelson, to whom they claimed distant kinship.¹² These subtleties notwithstanding, the conservative element of Montreal always identified Nelson with the rebellious French and his house was one of the first to be sacked by a pro-British mob in the Rebellion Losses riots of 1849. Nelson had demanded a "modest bill of £12,000" in compensation for his exile.¹³

Andrew Fernando Holmes (1797-1860), the coroner's witness and Nelson's opponent in this great debate, was a much less impulsive character.¹⁴ The vessel bearing his British parents to the New World had been captured by a French frigate and Holmes was born in Cadiz. He began his medical studies as the apprentice of the Montréal practitioner, Daniel Arnoldi (1774-1849), and received his licence in 1816. In order to further his education, he took a degree at Edinburgh and visited several European hospitals before returning to Montréal in 1820 where he practised with his former teacher for a short time. With his colleagues, William Robertson (1774-1844), John Stephenson (1797-1842) and William Caldwell (1782-1832 or 1833), all of whom had studied in Scotland also, Holmes was one of the founding physicians of the Montreal General Hospital in 1822 and of the

5. Rumilly, *Montréal*, 2: 229.

6. Ibid.

7. From an obituary in the *Montreal Gazette* quoted in "Audet's biographical notes", PAC, MG 30 D1, vol. 23, pp. 26-29.

8. W. Nelson and M. Bouchette, "Brief sketch of Canadian affairs hastily drawn up on board H.M. Ship Vestal by particular request of several officers of that ship, July 18, 1838" p. 6-7, PAC, MG 27 II C4, vol. 1, file 2, 1838.

9. In 1848, Nelson was called a traitor to the Patriote cause because he refused to support Papineau's proposals for electoral reform. In retaliation, Nelson recalled Papineau's previous "cowardice" in fleeing from St Denis a decade before. The epistolical polemic was waged in *L'Avenir*, esp. 8 juillet; 2, 9, 16 août, 1848 and in *La Minerve*, 27 mars; 6, 24 juillet 1848.

10. Rumilly, *Montréal*, 2: 328;

11. Leslie Roberts, *Montreal, From Mission Colony to World City* (Toronto: MacMillan, 1969), p. 204.

12. Admiral Horatio Nelson was a cousin of Wolfred's father. See Nelson, *Nelson*, p. 11.

13. Donald Creighton, *The Empire of the St. Lawrence* [1956] (Toronto: MacMillan, 1972), p. 375.

14. On the life of Andrew Holmes see Maude E. Abbott, *History of Medicine in the Province of Québec*, (Montreal: McGill University Press, 1931), p. 52-55; Andrew McPhail in *Biographies*, eds.: Kelly and Burrage, p. 541; Edward Horton Bensley, "Andrew F. Holmes," in *Dictionary of Canadian Biography*, 8: 403-5.

Montreal Medical Institute, the precursor of McGill's Faculty of Medicine in 1823. In 1844, he became the head of this Faculty, a position he retained until his death sixteen years later.

Holmes has been depicted as a quiet, well-liked man, one of the first Canadian physicians to produce publications of scientific, rather than political value on medicine and natural science.¹⁵ He helped to found the Natural History Society and was quietly involved in public functions, as director of the municipal library and president of the Montreal Auxiliary Bible Society.¹⁶ He was such an avid student of mineralogy that Thompson, of Glasgow, dubbed a mineral of the Ottawa region, 'Holmesite', in his honour.¹⁷ At Holmes' death, his remarkable botanical and geological collection was donated to McGill.

There is evidence, however, that Holmes had made some enemies. He continued to serve as a member of the unpopular Board of Medical Examiners even after 1823 when his own mentor, Daniel Arnoldi, was excluded by the legislative rearrangements of the Governor, Lord Dalhousie.¹⁸ During the rebellion of 1837-38, Holmes' close associate, Robertson, had suffered damage to his house because of his close connections with the British and his opposition to Louis-Joseph Papineau.¹⁹ Later, Holmes joined others to oppose the plea to grant its own degrees of the new *Ecole de médecine et chirurgie*, whose promoters included the sons of both Wolfred Nelson and Daniel Arnoldi. Such privilege, they claimed, would infringe on the rights of McGill and undermine the status of the entire profession.²⁰ An obituary stated that Holmes' lectures were displeasing and difficult to follow for their "minuteness and copiousness" of detail.²¹ Even each man could muster some respect for the other's talent, the romantic rebel and the scholarly dean had little reason to like each other.

On the day of Champeau's injury, a pro-Molson voter named Dyer was being taunted by a reformist, pro-Drummond crowd. According to the testimony of the farmer, Guillaume Mallet, he and Champeau were sitting in a cart above the skirmish, but when Dyer seemed to be in deep trouble, having been stripped and threatened, they jumped down to help him.²²

15. Abbott, *Medicine in Québec*, p. 52.

16. Anon., "The Late Professor Holmes", *BAJ*, 1 (1860): 524; F.W. Terrill, *A Chronology of Montreal and of Canada from 1752 to 1893* (Montreal: Lovell, 1893), p. 116.

17. Anon., "Holmes", p. 522.

18. Abbott, *Medicine in Québec*, p. 59; Barbara Tunis, "Medical Licensing in Lower Canada: the dispute over Canada's first medical degree", *Canadian Historical Review*, 55 (December 1974): 489-504, reprinted in S.E.D. Shortt, ed., *Medicine in Canadian Society* (Montreal: McGill-Queen's University Press, 1981), pp. 137-63.

19. As a city magistrate, Robertson's disagreement with L.-J. Papineau, speaker of the Legislative Assembly, took on exaggerated, public proportions when the former challenged the latter to a duel. See Stanly Brice Frost, *McGill University for the Advancement of Learning*, 2 vol. (McGill-Queen's University Press, 1980), 1: 128-9. According to a reporting letter, Robertson, who was a retired military officer, offered advice to the British military. PAC, Colborne Papers, MG 24 A 40, vol. 10, pp. 2681 and 2688. For this activity he has been called an "informer", Senior, *Rebellions*, p. 32.

20. Abbott, *Medicine in Québec*, p. 65. For more on the earlier social, professional and ethnic problems of medicine in Lower Canada see Barbara Tunis, "Canada's First Medical Degree"; "Issues in professionalization of medicine, Lower Canada, 1788-1847", *Newsletter Canadian Society for the History of Medicine*, 6 (September 1981): 17-20; "Medical education and medical licensing in Lower Canada", *Histoire sociale — Social History*, XIV (May 1981): 67-91.

21. Anon., "Holmes", p. 523.

22. This account of Champeau's death had been constructed from information in several different reports, especially those in the *Montreal Gazette*, *La Minerve* and in the *Montreal Medical Gazette*. W. Nelson also recorded this event, but lack of documentation and certain errors in date suggests that his narrative may be unreliable, Nelson, pp. 124-9.

Apparently without warning, the soldiers charged the crowd, their bayonets lowered. Several people were wounded, Champeau most severely. The town was outraged. Champeau had been engaged to be married on April 23, the day of his funeral. The crowd filled the cathedral and an immense procession followed his coffin to its final resting place beside the victims of May 21, 1832.²³ A coroner's inquest was launched to establish the reasons for the unannounced attack and the magistrate, Dyde, was charged with murder. Medical details of the case appeared in the testimony.

Shortly after sustaining his injury, Champeau, was advised to see Nelson, by no means an accidental choice of physician.²⁴ His wound, 3 ½ inches both left and above the umbilicus, was dressed and the patient was warned to call for help if he had any problems. Twenty-four hours later, Nelson was called to Champeau's bedside. The patient lay with his legs drawn up, the pulse was 120 and feeble, the skin hot and dry and the abdomen, distended and painful on the left to pressure and movement. Respiration was shallow and rapid, urine was scant and there had been no bowel movement. These were "the usual symptoms of inflammation," Nelson said. He bled the patient rapidly of twenty-four ounces. In applying a poultice, he noticed a second non-painful, but very swollen wound in the flank. After a brief improvement, the symptoms returned with vomiting. Nelson took another twenty-two ounces of blood and prescribed calomel,²⁵ castor oil and enemas of bran tea. The patient passed copious, foetid stools, but the abdominal findings were unchanged. He was bled another seven ounces and given more calomel. His condition deteriorated and he died on April 21st at 1 a.m., three and a half days after sustaining his injury.

Nelson and Holmes met to inspect the body eight hours later. The abdomen was distended, the lumbar region was discoloured and serosanguinous fluid with bubbles of air escaped from the posterior wound. Nelson described this as "gangrenous"; Holmes did not. The anterior wound was smaller than the flank wound, but both were of the same shape and it was thought that Champeau had sustained a through-and-through injury, in other words that he had been stabbed from the front, through to the back via the abdomen.

The autopsy took place on the following day and was performed by Dr Pierre Beaubien (1796-1881) in the presence of Holmes, Nelson, his son Horace, and Dr Tavernier. To their surprise there was no connection between the two wounds and neither had penetrated the serous wrapping of the abdominal organs, the peritoneum. The tissue surrounding the 1 ½ inch flank wound was mottled brown and the cuticle had separated from the dermis. Nelson commented that there was a spot of bruising on the peritoneum

23. On 23 April 1844, Louis-Joseph-Amédée Papineau, the son of Louis-Joseph, recorded in his diary, "j'assisté avec Emery aux funérailles de pauvre Julien Champeaux (sic), que les troupes, dans une charge qu'ils firent sur le peuple mercredi le 17 du poll du Marché à Foin, percèrent de trois coups de bayonette. C'est un second 21 mai 1832, plus exécrable encore parce qu'il n'y avait l'ombre d'un émeute et que la charge se fit sans annonce préalable, sans lecture de proclamation ... Le concours de citoyens est immense. La foule remplit la nef de Notre Dame pendant toute la durée du service solennel; et une procession plus nombreuse encore suit le convoi jusqu'au cimetière. La figure s'étendait toute la longueur de la rue St. Antoine. Au cimetière je visite respectueusement pour la première fois la tombe de mon grand père, et celles des martyrs du 21 mai", "Journal d'un fils de la-Liberté", PAC, MG 24 B2, vol. 32, p. 199, microfilm C-14025. The "martyrs" of 21 mai 1832 were three people killed by troops in riots surrounding a Montreal by-election. See Ouellet, *Lower Canada*, pp. 226-7.

24. Testimony of Louis Bourassa, *La Minerve*, 25 avril 1844.

25. Mercurus chloride, a powerful, but highly toxic cathartic used ubiquitously throughout the nineteenth century. On calomel See John S. Haller, *American Medicine in Transition, 1840-1910* (Urbana, Chicago, London: University of Illinois Press, 1981), pp. 77-90.

immediately under the anterior wound and that the “whole membrane was opaque of a dull reddish colour.” Holmes gave a completely different assessment of the peritoneum. It was, he said, “smooth, glossy and transparent” throughout and there were no effusions nor adhesions. He claimed that the bruise in the muscular layer was visible only by virtue of the perfectly normal transparency.

In court, Nelson refused to state the cause of death, although he was certain of his clinical diagnosis peritonitis, or “inflammation of the abdomen”. Holmes said that the results of the autopsy were inconclusive. There was no inflammation of the abdomen, he said, and neither wound was sufficient to have caused death. He suggested that something “independent of the flesh wounds”, perhaps the bruise in the flank, must have been accountable. “People sometimes die in an extraordinary manner,” he said, “without medical men being able to account for death.”

Three days later, because of the “striking discrepancy” between Holmes’ evidence and his own, Nelson drafted an eleven page essay to the new *Montreal Medical Gazette* (MMG).²⁶ This journal, the earliest English Canadian medical periodical and the only Montreal medical journal at the time, was in its first and last year of publication. The editors, Francis Badgley (1807-63) and William Sutherland (1814-74) had launched the publication at their own expense to improve the dissemination of medical knowledge in Lower Canada and to provide an alternate focal point for the medical establishment. They “laid editorial siege to McGill” and all other chauvinistic institutions.²⁷ For the most part, however, the well-written articles were devoted to scientific advances, rather than political controversy. The editors did not publish Nelson’s letter until September, possibly giving Holmes a chance to read the material and indicate his intentions to reply, assuring themselves thereby of a journal-selling duel.

Using a double-column style, Nelson placed Champeau’s case beside “the symptoms as laid down by the best writers,” so that “every man, layman and doctor alike, could judge for himself” whether or not this was a case of “intense inflammation, as I felt bound in my evidence to maintain.”²⁸ He quoted thirteen authorities on peritonitis (see Table 1) and added that other medical witnesses to the case had agreed with his pre-mortem diagnosis. He concluded that Champeau had indeed suffered from peritonitis, but the effective and correct therapy had masked the pathological signs. The cause of death, he announced, was gangrene from the posterior wound.

Holmes’ 20-page reply was printed in the next issue of the *MMG*.²⁹ He emphasized that the subject of this debate “though much amplified by Dr Nelson ... resolves itself to the question: What are the pathological appearances requisite to establish the pre-existence of inflammation of the peritoneum?” He admitted that, given the clinical presentation, he too would have diagnosed peritonitis, but “enlightened by the post-mortem” he had to admit “without hesitation” that it was not. Nelson’s insistence on the clinical evidence for peritonitis in the absence of pathological support was futile.

26. W. Nelson, “To the editors,” *Montreal Medical Gazette*, 1 (Sept. 1844): 163-73.

27. See Charles G. Roland and Paul Potter, *An Annotated Bibliography of Canadian Medical Periodicals* (Toronto: Hannah Institute for the History of Medicine, 1979), p. 45-7.

28. *MMG* 1 (Sept. 1844): 163.

29. A Holmes, «Dr. Holmes’ remarks on Dr. Nelson’s communication.» *MMG*, 1 (Oct. 1844): 198-217.

Table 1 Authorities cited by Wolfred Nelson

References	Probable Source
John Bell on wounds pp. 229, 233, and 238	John Bell (1762-1820) <i>Discoveries on the Nature and Cure of Wounds</i> (Edinburgh: Bell and Bradfute, 1795; 2d ed. 1807)
Castle's <i>Manual</i> pp. 55, 138, 140	Thomas Castle (1804?-40?) <i>A Manual of Surgery</i> (London: Cox, 1839)
Cooper's <i>Surg. Dict.</i> v. 2: 40, 178	Samuel Cooper (1781?-1849), <i>A Dictionary of Practical Surgery</i> 3d ed. London: (Longman, 1818)
Craigie* <i>Elements of Physic</i> , v. 2: 161, 171, 178, 179	David Craigie (1793-1866) <i>Elements of the Practice of Physic</i> , <i>presenting a view of the present state of special pathology and therapeutics</i> 2 vol., (Edinburgh: Black, 1836)
<i>Cycl. Pract. Med.*</i> v. 2: 270, 766; v. 3: 206, 292	<i>Cyclopaedia of Practical Medicine</i> , 4 vol., eds: John Forbes (1797-1861), Alex. Tweedie and John Conolly (London: Sherwood, 1833; Am. ed.: Robley Dun- glison, Philadelphia, 1845)
Dewees pp. 552, 554, 556	William Potts Dewees (1768-1841), <i>A Practice of Physic</i> (Philadelphia: Carey and Lea, 1830; 2d ed., Philadelphia: Carey, Lea and Blanchard, 1833)
<i>Dict. Scien. Méd.*</i> v. 40: 498, 502, 507, 523 v. 41: 430, 431	<i>Dictionnaire des Sciences Médicales</i> , 60 vols, Adelon, et al., eds (Paris: Panckoucke, 1812-22)
Dunglison's <i>Dictionary</i> v. 1: 426	Robley Dunglison (1798-1869), <i>A Dictionary of Medical Science</i> (Boston: Bowen, 1838; 4th ed., Philadelphia: Lea and Blanchard, 1844) All editions of this and the <i>Medical Lexicon</i> have only one volume.
Good* v. 1: 504, 505, 506	John Mason Good (1764-1827) <i>The Study of Medicine</i> , 4 vols. (London: Baldwin, Cradock and Joy; 6th Am. ed., improved by S. Cooper, New York: Harper, 1835)
<i>Larrey Chirurgie Militaire</i> v. è (sic): 143	Dominique-Jean Larrey (1766-1842) <i>Mémoires de Chirurgie Militaire</i> 4 vols. (Paris: J. Smith, 1812-17; first Am. ed., Baltimore: J. Crushing, 1814; 2d Amn. ed., Baltimore: Maxwell, 1823)
Liston <i>Elements of Surgery</i> pp. 44, 176	Robert Liston (1794-1847) <i>Elements of Surgery</i> (London: Longman, 1831; 2d ed. 1840; 1st first Am. ed., Philadelphia: Barrington and Haswell, 1837; 2d, 1842)
Macintosh (sic)* v. 1: 22, 270, 271	John Mackintosh (?-1837), <i>Elements of Pathology and the Practice of Physic</i> , 2 vol. (London: Longman, 1831; 4th Am. ed., Philadelphia: Lindsay and Blakiston, 1844) Holmes specifically mentioned an "Ed. ed.* possibly ed.: J. Carfrae (Edinburgh, 1828-30) Mackintosh also published on puerperal fever
Travers <i>Inquiry</i> pp. 32, 33	Benjamin Travers (1783-1858) <i>An Inquiry into the Process of Nature in Repairing Injuries of the Intestines</i> (London: Longman, 1812)
Chomel 1841	1847 Additions A.F. Chomel (1788-1858) <i>Eléments de Pathologie Générale</i> (1817), 3d ed. (Paris: Fortin et Masson, 1841)

Table 1 (cont.) Authorities cited by Wolfred Nelson

References	Probable Source
Copland	James Copland (1791-1870) <i>A Dictionary of Practical Medicine</i> , (London: Longman, 1835 Am. ed., 1859)
Wardrop's Baillie* Morbid Anatomy	Matthew Baillie (1761-1823) <i>The works of Matthew Baillie</i> , 2 vols, ed: James Wardrop (London: Longman and Hurst, 1825)

* Citations extended or corrected by Holmes

Holmes adopted Nelson's double-column approach to demonstrate effectively that many of Nelson's quotations were incomplete and out-of-context. He showed how Nelson had used translations of the same passage as two different citations and for others, the references had been mistaken or non-existent. He introduced eleven more English language authorities and not to be outdone by Nelson's socio-political francophilia, he cited Andral, Broussais and Rostan in French (see Table 2). Holmes juxtaposed his autopsy to that "according to Nelson". He reminded his readers that gangrene, which Nelson had named as the cause of death, was a "vital" operation and stated that, in his opinion, the lumbar discoloration had been post-mortem change. He focused on a previously overlooked finding: redness in the mucosa of the stomach. Holmes had insisted on examining this organ out of a "curiosity to know whether there would be ... any of those appearances (which are) common occurrences in the stomachs of those addicted to the use of spirituous liquors," and having done so he was "at no loss to account for the congestion and inflammation in the mucous coat of Champeau's stomach."³⁰

Holmes concluded that the symptoms were related to the injury, but that the patient had died of his underlying precarious state of health, of the abuse and rapid withdrawal of alcohol and of his doctor's care. He exonerated Nelson from any blame in choosing to treat the case as one of peritonitis, but he criticized the 24-hour delay before the start of therapy and the choice of rapid venous bleeding. He did not object to bleeding *per se*, but to its speed. He would have recommended slower, local bleeding "by the imposition of a large number of leeches".³¹

The debate degenerated into polemic. The next three numbers of the *MMG* contained "Nelson's rejoinder", "Dr Holmes' reply to Dr Nelson's rejoinder" and "Dr Nelson's final reply", but neither changed his stance.³² Infuriated at the suggestion that his patient had abused spirits, Nelson published a certificate testifying to the "abstemious and sober habits of Champeau who drank not even beer", signed by seven of Champeau's French Canadian friends and to explain the stomach findings, he directed Holmes to the "late French writers on pathology."³³ He referred to his opponent as "the naive Dr. H", "The Professor", "book-worm" and "a tottering edifice requiring many props," and he adorned his text with moralizing poetry.

30. *Ibid.*, p. 212.

31. *Ibid.*, p. 215.

32. *MMG* 1 (Nov. 1844): 237-42; (Dec. 1844): 265-68 and (Jan. 1845): 297-301, respectively.

33. *Ibid.*, p. 240. By "the late French writers" Nelson clearly implied Broussais (whom Holmes had cited) and his theory of gastric irritation and inflammation as the localized root of all generalized fevers.

Table 2 Authorities cited by Holmes

References	Probable Source
Abercrombie on the stomach 3rd ed., p. 158	John Abercrombie (1781-1844) <i>Pathological and Practical Researches on Disease of the Stomach, the Intestinal Canal, the Liver and other viscera</i> 1828; 3d Am. ed. (Philadelphia: Carey, Lea and Blanchard, 1838)
Alison Outlines of path.	Wm. Puttney Alison (1790-1859) <i>Outline of Pathology and the Practice of Medicine</i> (Edinburgh: Blackwood, 1844; Philadelphia: Lea and Blanchard, 1844) Alison published on fever in 1840 and 1843.
Andral <i>Clinique médicale</i> v. 2: 551	Gabriel Andral (1797-1876) <i>Clinique Médicale</i> , 4 vols (Paris: Gabon, 1823-27)
Baillie p. 127	Matthew Baillie (1760-1823) <i>Morbid Anatomy</i> (1793) (3d Am. ed, Philadelphia: Hickman and Hazzard, 1820) see Table 1 "Wardrop"
Boussais <i>Histoire des phlegmasies</i> v. 3: 386-7	F.J.V. Broussais (1772-1838) <i>Histoire des phlegmasies</i> , (Paris: Gabon, 1816; 5th ed., 3 vol., Paris: Mequinon-Marvis, 1838)
Broussais <i>Cours de pathologie</i> t. 2	<i>Cours de Pathologie et de Thérapeutique générale</i> , 2 vol. (Paris: Delauney, 1832-33; 2d. ed., 5 vol., Paris: Baillièrè, 1834-35)
Crawford on Inflammation in <i>Cycl. Pract. Med.</i> v. 2: 716, 717, 765	<i>Cyclopaedia of Practical Medicine</i> see Table 1 "Cycl."
Elliotson, <i>Lectures</i> p. 813	John Elliotson (1786 or 1791-1868) <i>Lectures on the theory and Practice of Medicine</i> (London, Cooke and Thompson, 1839); 2d ed. renamed <i>The Principles and Practice of Medicine</i> (London: Butler, 1846)
Marshall Hall <i>Princip. of Med.</i> pp. 7, 9, 17	Marshall Hall (1790-1857), <i>Principles of the Theory and Practice of Medicine</i> (London: Sherwood, 1837 Boston: Little and Brown, 1839)
John Hunter on Blood and inflammation pp. 387, 680	John Hunter (1728-93) <i>A Treatise on Blood, Inflammation and Gunshot Wounds</i> (London: Nicoll, 1794; Philadelphia: Bradford, 1796 and Webster, 1817 and 1823)
Rostan <i>Médecine clinique</i> v. 2: 481	Léon L. Rostan (1790-1866) <i>Cours de Médecine Clinique</i> , 3 vols, (Paris: Béchet, 1830; Brussels: Dumont, 1836)
Sewall of Washington plates for the Temperance Society	Thomas Sewall (1787-1845) <i>An address on the effects of intemperance on the intellectual, moral, and physical powers, delivered before the Washington Temperance Society</i> (Washington: Greer, 1830)
Stokes on peritonitis <i>Cycl. Pract. Med.</i> p. 303	William Stokes (1804-78), <i>Cyclopaedia of Practical Medicine</i> see Table 1
Symonds <i>Lib. of Med.</i> v. 4: 142	John Addington Symonds (1807-71) in <i>System of Practical Medicine</i> , 5 vol. (first series of the Library of Medicine) ed.: Alexander Tweedie (1794-1884) (London: Whittaker, 1840)

Table 2 (cont.) Authorities cited by Holmes

References	Probable Source
Watson Lect. on inflammation v. 1: 155, 157, 159 v. 11 (sic): 178	Alexander Watson <i>Essays on Surgical Pathology and Practices</i> (Edinburgh: Maclachlan and Stewart, 1843) only one volume
Williams <i>Princip. of Med.</i> pp. 215, 222, 233, 240, 252	C.J.B. Williams (1805-1889) <i>Principles of Medicine</i> (London: Churchill, 1843)
Grisolle, 1844	1847 Addition Augustin Grisolle (1811-69) <i>Traité Élémentaire et Pratique de Pathologie interne</i> (Paris: Masson, 1844)

See also those works indicated * in Table 1.

Holmes gloated. It seemed that the “obnoxious Dr. N.,” that “distorter of facts,” did finally admit that peritonitis had not been the pathological diagnosis. Holmes controlled his verbal insults, but peppered his essay with hostile punctuation: double and triple exclamation marks. He ended weakly, however, on a belated reference to the stomach inflammation, but without comment on the diagnostic implications of Champeau’s well-defended temperate habits. The *MMG* gave Nelson the last word. He complained of the contradictory accusations that he had killed the patient by his choice of therapy and that he had provided this fatal treatment too late.

The *MMG* folded after two more issues, ostensibly to make room for another English periodical. Holmes was officially proclaimed Dean of Medicine. Ignoring his previous statement that he wished to withdraw from politics, Nelson was returned to the Legislative Assembly for Richelieu in November 1844.³⁴ In the following year, he was appointed Chairman of the Montreal Board of Health. Despite the apparent calm, the great peritonitis debate had only just begun.

On January 4, 1847 at 2 a.m. the Reverend Mr. Caleb Strong died after a “short but severe illness.” Autopsy revealed a ruptured appendix. Strong had been the 31 year-old pastor of the American Presbyterian Church, the same edifice near which Champeau had received his fatal wound. The death of one so young and well-liked occasioned some comment in the popular press,³⁵ but his attending doctor, Wolfred Nelson, considered it to be of signal interest for the medical profession. The following month, he published the case simultaneously in the only Canadian medical journals of the time: the *British American*

34. When Nelson returned from the U.S.A., he announced his wish to withdraw from politics altogether, Nelson, *Nelson*, p. 127. He defeated Denis-Benjamin Viger in Richelieu on 12 November 1844. To a certain extent, his return to the political scene, like the election itself, was prompted by his involvement with Champeau. See Creighton, *Empire*, p. 356.

35. *Montreal Gazette*, 4 January 1847. Strong seems to have been a liberal anglophone, like his doctor. L.-J.-A. Papineau was friendly with him and was infuriated that the French journals had not even announced his death, Papineau, “Journal”, 7 Jan. 1847, vol. 35, p. 96.

Journal of Medical and Physical Science (BAJ),³⁶ in its second year of publication and in the new bi-monthly *La Lancette canadienne (LLC)*,³⁷ which survived only six months. These two publications covered a political spectrum: the *BAJ*, edited by Archibald Hall (1813-68) and Robert MacDonnell (1817-78), was a decidedly pro-McGill, English language journal; the *LLC* edited by J-L. Leprohon (1822-1900), a liberal who would later be involved with the McGill's rival l'Ecole de médecine et de chirurgie, had been created to provide a source of information about medical progress in France and England for French-speaking practitioners.³⁸

Strong had been stricken with right lower abdominal pain on the afternoon of New Year's Day, 1847. He was neither febrile, nor constipated, but Nelson treated him with strong laxatives, enemas, poultices and vigorous bleeding, all to no avail. The patient pointed to a circumscribed area in the right lower abdomen saying, "if you could only open that small place how it would relieve me!" Twelve leeches were placed over the right groin. Later the pain became diffuse, the whole abdomen tense and fever and tachycardia ensued. Three consultants prescribed eighteen more leeches to the right lower abdomen. All agreed that the pain had begun as an "inflammation of a mucous surface" (internal lining), but had progressed to "inflammation of serous tissue (external lining), or peritonitis." Nelson reported that Strong had died "fully aware of the impending result, with calmness and dignity of a good Christian and a good man."³⁹

At autopsy, the peritoneum was red and there was a large effusion and some adhesions. The appendix, so "altered in appearance and structure, as to be scarcely recognizable ... and evidently in a state of gangrene, ... contained two portions of gallstone." These changes were illustrated in an engraving, which accompanied the article in the *BAJ*. Nelson quoted several authorities but he did not refer to the case of Champeau of nearly three years earlier.

Holmes was quick to write to both journals to remedy the oversight.⁴⁰ He recalled the case of Champeau and concluded that Nelson had evidently learned his lesson about the pathological signs of peritonitis. Strong had indeed died of peritonitis. Not only had Nelson correctly recognized the diagnosis, complimented Holmes, but he had also modified his treatment to local bleeding by leeches. To establish priority over Nelson's diagnosis, he included the details of one of his own earlier cases, that of a 20-month-old child whose unexplained symptoms of fever and restlessness led to death. The baby's autopsy had revealed a ruptured appendix, which contained a "calcareous deposit". The *BAJ* terminated the debate with Holmes's reply, but recognizing a heightened interest in the subject that year published two more cases of peritonitis drawn from other medical sources.⁴¹

The irate Nelson found a willing platform in the *LLC*.⁴² He compared the clinical circumstances of Champeau's case to those of Strong, attacking Holmes for his ignorance

36. W. Nelson, "Case of inflammation of the appendix vermiformis, from gallstones lodging in it ending in gangrene and death", *British American Journal of Medical and Physical Science*, 2 (Feb. 1847): 256-58.

37. W. Nelson, "A l'éditeur de la 'Lancette Canadienne'", *La Lancette Canadienne*, 1 (1 Feb. 1847): 10-11.

38. Roland and Potter, *Bibliography*, pp. 4 and 39.

39. Nelson, "Appendix", p. 258.

40. A.F. Holmes, "On obstruction of the appendix vermiformis, and on 'post-mortem' appearances in peritonitis," *BAJ*, 2 (March, 1847): 285-87; "Des marques diagnostiques de la péritonite dans les autopsies," *LLC*, 1 (1 Mar. 1847): 20-1.

41. *BAJ*, 2 (April 1847): 329 and 3 (1847): 157.

42. *LLC*, 1 (15 Mar. 1847): 25-6.

of the clinical setting. The niceties of pathology were useless, he claimed, when it came to treatment. Pathology was not reliable: "Quelle lésion peut-on découvrir dans le tétanos, l'hydrophobie, la chorée etc.?" he demanded. The very serious illnesses he cited had not yet been associated with specific pathological changes, although as clinical diseases their features were quite recognizable and their dire consequences, indisputable. He admonished Holmes with a quote from the Parisian authority, Pierre Louis (1787-1858), condemning pre-conceived ideas.⁴³

Holmes responded by contrasting the inconsistencies and reversals in Nelson's statements between 1844 and 1847.⁴⁴ He defended the value of pathology as the best means of proving a clinical diagnosis. Like the *MMG*, its English predecessor, the *LLC* allowed Nelson the final say. He raged against Holmes for the professorial approach by which he had created, for his own convenience, a theoretical framework devoid of practical application.⁴⁵

The debate ended there. A few weeks after Strong's death, Nelson and his son, Horace, performed the first Canadian operation using ether anesthetic.⁴⁶ The following year, McGill bestowed an honorary degree on the former rebel, but no record was kept of any comment the Dean may have made about this decision.⁴⁷ Two years later in 1849, Nelson was appointed inspector of prisons, a task to which he was said to have applied himself with authority because of his "inside" experience, and in 1854, he became the first popularly elected mayor of Montréal.⁴⁸

WHAT HAD NELSON AND HOLMES BEEN ARGUING?

Peritonitis, or inflammation of the serous membrane of the abdomen, was a relatively new disease in 1844. That they chose this subject to debate reveals an up-to-date awareness of the conceptually "chic" in medical diagnosis. The appearance of peritonitis as a disease was inextricably linked to the development of the notion of tissue-specific, rather than organ-specific lesions, a product of the late eighteenth century. Tissular specificity, meant that anatomical changes characterized precise types of body fabric, or histological planes, rather than certain organs or other regions of the body. Thus, inflammation of the serous tissue, the peritoneum, was seen to resemble more the inflammation of other serous surfaces, such as the pleura (the wrapping of the lungs), than the inflammation of other abdominal contents.

43. Ibid. "Quand je me suis fait une idée, a priori, des faits non encore analysés, j'ai toujours vu après cette analyse, que mon idée, a priori, était fausse." The exact reference for these words of P.C.A. Louis (1787-1858) was not given, but most likely they were taken from his *Recherches sur la Phthisie Pulmonaire* (Paris: Gabon, 1825; 2nd ed., Paris: Baillière, 1843).

44. *LLC*, 1 (1 April 1847): 31.

45. *LLC*, 1 (15 April 1847): 33.

46. The Nelsons removed a two-pound tumour from the thigh of a woman sometime between February and April of 1847. On 11 March 1847, E. Worthington of Sherbrooke amputated a leg using ether anesthetic and perhaps slightly earlier James Douglas used ether during the amputation of toes. Andrew Holmes was also one of the first to use anesthesia in Canada when he gave chloroform to relieve a patient suffering painful labour. See *BAJ* 2 (April 1847): 338; 3 (May, 1847): 10, 34; 3 (Jan. 1848): 263-64.

47. The manuscript minutes of the Faculty Meetings occasionally contained comments about honorary degrees. For example, the honorary degree awarded James Douglas had been discussed on 17 May 1844. No record of comments about the degree for W. Nelson in 1848 has survived in the Manuscript Minute Book Medical Faculty of McGill College, 1842-52, McGill University Archives, RG 38, C1. See also McGill Faculty of Medicine, Announcement (Calendar) 1859-60 and 1860-61.

48. Previous mayors had been chosen by the vote of a committee. Nelson succeeded Charles Wilson and was followed by Henry Starnes in 1856. Terrill, *Chronology*, pp. 204 and 212.

Both Nelson and Holmes acknowledged the important contributions of the Parisian physicians, Philippe Pinel (1745-1826) and Xavier Bichat (1771-1802), to this innovative concept. Nelson also praised Guillaume Dupuytren (1777-1835), François Magendie (1783-1855) and A. Velpeau (1795-1865) for similar contributions.⁴⁹ Recently, however, it has been shown that this notion originated in Britain in the school of John Hunter (1728-93) with the work of a scarcely known doctor, John Carmichael Smyth (1741-1821). Smyth's ideas definitely had influenced Pinel, if they were not plagiarized by him.⁵⁰ It is interesting that both Montreal doctors, despite their British training and familiarity with the work of John Hunter, were as ignorant of the English contribution in histology as are many modern historians.

The first use of the word "peritonitis" is attributed to Johann Gottlieb Walter (1734-1818), a German pathologist, who applied it to changes he observed in a cadaver.⁵¹ The inventor of the stethoscope, René T.H. Laennec (1781-1826), while still a student in 1802-1803, made an essential contribution to the history of this disease by linking pre-mortem symptoms of six patients with post-mortem changes observed in their cadavers.⁵² Laennec also made the new assertion that peritonitis could occur as a separate clinical disease without any other associated pathological change. Thus, a condition, unheard of less than twenty years before, had entered the clinical realm of diagnostic possibility. Until the advent of antibiotics in the 1940s, the disease was a terrifying experience for both doctor and patient because there was no effective treatment. The victim was doomed to certain, agonizing death; its effect on the mind of any practitioner, who had witnessed only one such case, was riveting.

The result of Laennec's definition of peritonitis was an explosion of journalistic activity, which began in France and spread to Germany, Britain and North America (see Figure 1). The vast majority of the publications were brief articles and in France especially, they were often dissertations for the doctorate of medicine. Initially concerned with the features of the disease, the publications displayed increasing interest in causes and therapy (see Figure 2). Invariably, Nelson and Holmes cited dictionaries and general authoritative works on pathology and medicine, rather than the primary sources. Most of the textbooks cited, however, were in fairly recent editions, which recognized the new contributions. Older works of Hunter and Larrey were used to bring the added weight of classics by virtue of the authors' stature.

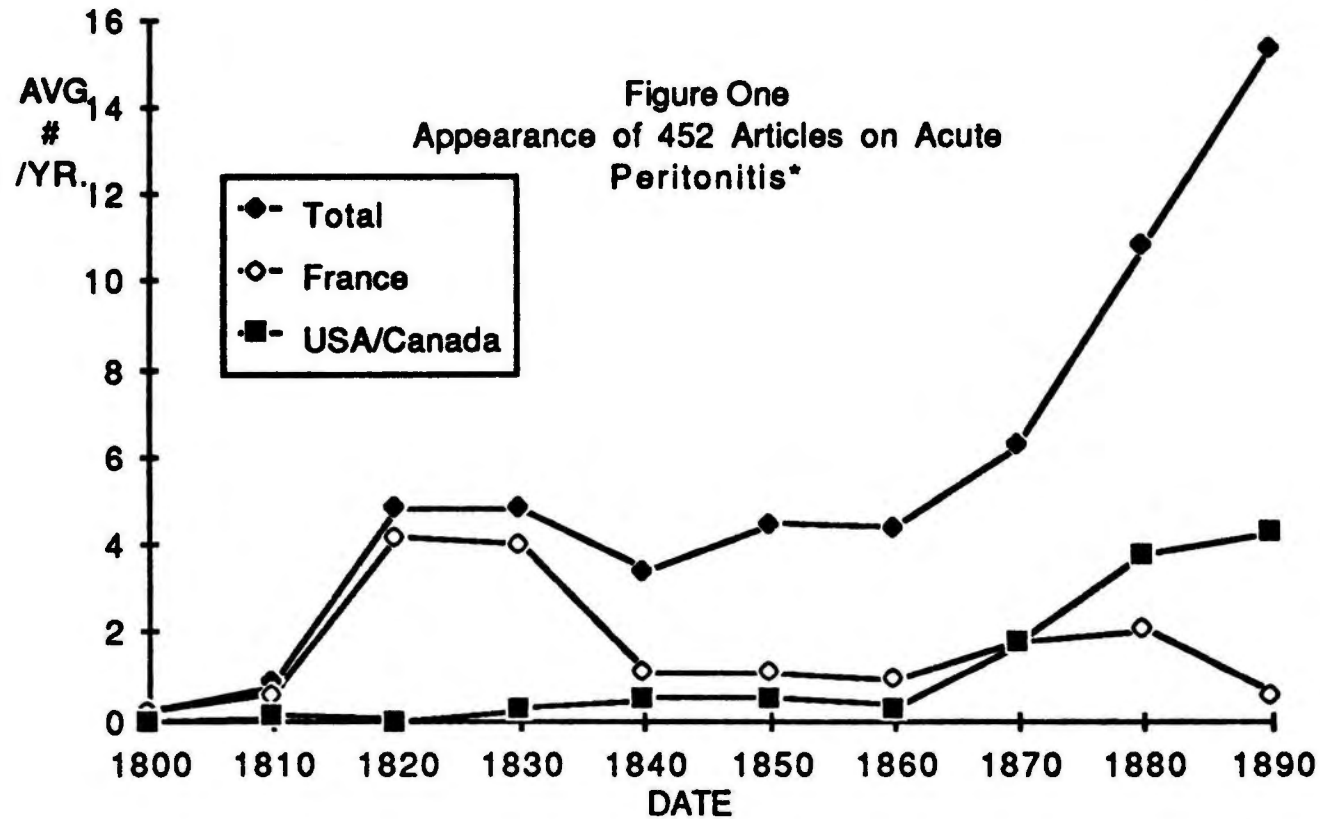
The history of peritonitis is intimately linked with that of puerperal, or child-bed fever. In 1846, at the time of the Canadian debate, Karl Rokitsky (1804-78) of Vienna was writing his new treatise of pathology in which he classified peritonitis as one manifestation

49. *MMG*, p. 166, 200, 204 and 298; *LLC*, p. 10. It could have been Velpeau's interest in the therapy, rather than diagnosis, of peritonitis that had impressed Nelson. A. Velpeau, "De l'emploi des mercuriaux dans le traitement de la péritonite", *Arch. Gén. Méd.*, XIX [1829] (reprint ed., Paris: Migneret, 1929).

50. Othmar Keel, *Philippe Pinel, Lecteur Discret de J.C. Smyth (1741- 1821). La Généalogie de l'Histopathologie: une Révision Déchirante* (Paris: Vrin, 1979). See also Othmar Keel, "La constitution et diffusion de la problématique tissulaire: leur autonomie par rapport à l'Ecole Clinique de Paris", paper read at the Nineteenth International Congress of the History of Medicine, Dec. 1984-Jan. 1985 to appear in the Acte of the Congress.

51. Johann Gottlieb Walter (1734-1818) in 1785.

52. R.T.H. Laennec, "Histoires de l'inflammation du péritoine, recueillies à la Clinique de l'Ecole de Médecine de Paris sous les yeux des professeurs Corvisart et J.J. Leroux", *J. de Méd.*, 4 (an X [1802]): 499-547 and 5 (an XI [1803]): 3-59.



* Source: Index Catalogue Library of the U. S. Surgeon General, 1889

of child-bed fever.⁵³ An English translation of this work did not appear until much later. Rokitsky's dissections laid the groundwork for the studies of his Hungarian colleague, Ignaz Semmelweis (1818-65), now famous for his historic handwashing, the effective preventive measure against child-bed fever. At the time of the Canadian debate, Semmelweis was working in the maternity clinic of Vienna where he experienced a flash of insight about the transmission of the disease when he connected the death and autopsy of an associate with the concepts of blood poisoning, peritonitis and puerperal fever.⁵⁴ The associate, Kolletschka, died on March 20, 1847, less than three months after the death of the Rev. Strong, and the handwashing rule was implemented in May.

The role of the appendix in serous inflammation was also a new subject at the time of this great debate. Autopsy reports of appendiceal foreign bodies and rupture date back to the mid-sixteenth century; however, the first case of accurate pre-mortem diagnosis of inflamed appendix with post-mortem confirmation was published by John Parkinson (1755-1824) in 1812.⁵⁵ In 1825, appendiceal rupture was first cited as a cause of peritonitis,⁵⁶ Most of the familiar aspects of this disease were described much later: the term "appendicitis" was not used until 1886;⁵⁷ Charles McBurney (1845-1913) described the diagnostic point tenderness, which bears his name, in 1889.⁵⁸

Successful treatment for appendiceal inflammation, the familiar and now common appendectomy, like any abdominal surgery, was dependent on the development of safe, effective anesthesia. Ether anesthesia was introduced in 1846 by Morton at the Massachusetts General Hospital of Boston and chloroform by Simpson in Edinburgh in 1847. The next year, Henry Hancock (1809-80) of England performed the first successful operation for inflamed appendix.⁵⁹ Despite these advances, operative intervention in appendicitis was not common until late century often because of failure to recognize the diagnosis in the pre-mortem setting. Abraham Groves (1847-1935) is credited with the first Canadian appendectomy for a kitchen table procedure on a boy in Fergus, Ontario, in 1883.⁶⁰ In the mid-1840s prior to the development of anti-sepsis, but with the dawn of

53. Karl Rokitsky, *A Manual of Pathological Anatomy* (1846), 4 vol (Philadelphia: Blanchard, 1855), 2: 25-28, 27-30 and 234-36.

54. Ignaz Semmelweis, *The Etiology, Concept and Prophylaxis of Childbed Fever* (1861), edited, translated and introduced by K. Codell Carter (Madison: University of Wisconsin Press, 1983), pp. 87-88.

55. John Parkinson, "Case of diseased vermiform appendix", *Med. Chir. Trans.*, London, III (1812): 57.

56. By J.-B. Louyer-Villermay (1776-1837), according to J.E. Schmidt, *Medical Discoveries. Who and When* (Springfield: Charles C. Thomas, 1959), p. 31.

57. Until the early twentieth century, the word "perityphilitis", first used by Dunglison's Medical Lexicon in 1844 (Oxford English Dictionary), was commonly used to designate inflammation of the tissue in the right lower quadrant of the abdomen surrounding the caecum (typhilon) to which the appendix is attached. The first to use the word "appendicitis" was the American, Reginald Heber Fitz (1843-1913) in his essay, "Perforating inflammation of the vermiform appendix with special reference to its early diagnosis and treatment", *Boston Medical and Surgical Journal*, CVX (1886): 13.

58. Charles McBurney, "Experience with early operative interference in cases of disease of the vermiform appendix", *N.Y. Med. J.*, 50 (1889): 676-84.

59. Henry Hancock, *A short account of disease of the appendix caeci cured by operation with suggestion as to the propriety of adopting a similar method of proceeding in certain cases of peritonitis* (London: Thompson and Davidson, 1848).

60. C.W. Harris, "Abraham Groves of Fergus. The first elective appendectomy?", *Can. J. Surg.* 4 (1961): 405-10; D.J. Sanders and Peter J.E. Cruse, "Abraham Groves. Canadian Pioneer Surgeon", *Ann. R.C. Phys. Surg. Can.* 17 (1984): 328. Willard Parker (1800-84) has been called the first American to perform an appendix operation in New York in 1843, but he did not publish the experience until 1866. His procedure was not appendectomy, but the draining of an appendiceal abscess. Sir Fredrick Treves (1807-87) also worked

anesthesia and of intra-abdominal surgery brightening the horizon, appendicitis and peritonitis represented focal issues at a medical turning point.

WHO WON THE DEBATE?

It is clear that Strong died of peritonitis secondary to a ruptured appendix, as Nelson and Holmes agreed. The pastor's insistence on the precise spot of pain is without doubt an example of McBurney's point tenderness 42 years before McBurney. His desperate plea for an operation is all the more poignant to a modern reader juxtaposed, as it is in the same journal issue to a report on the first Canadian experiments with ether by Horace Nelson, the son of his doctor.⁶¹

Champeau, on the other hand, did not have peritonitis. The description of the autopsy findings virtually eliminate this possibility. Nelson's suggestions that death had been too rapid for obvious post-mortem changes or that therapy had eliminated them cannot be supported: certain irreversible changes would have occurred within hours of the first symptoms. Holmes was right about the autopsy, but Nelson had made a better guess about the cause of death. Champeau probably died of septicemia due to some form of wound infection. The lesion in the stomach was most likely gastritis, or a Cushing's ulcer, arising from the stress of both his illness and his therapy. Nelson claimed that his bleedings had improved the anatomical appearance; Holmes implied they had killed the patient. Neither were right. Severe anemia attendant on such therapy might decrease the amount of redness, but it could not prevent tiny hemorrhages and effusions which are characteristic of the disease. Conversely, although the phlebotomies did not help and may even have hastened Champeau's demise by inducing shock and added infection, they could not have caused his abdominal pain, nor did they bring about the fever, which had preceded Nelson's treatment.

There was nothing rustic about this debate. The issues were new and controversial in even the world's foremost medical institutions. The authors cited by Nelson and Holmes reveal that they were aware of the most up-to-date European and American literature on this problem. Although they were in possession of all the necessary technology to further define peritonitis, neither doctor can be blamed for not noticing what their most illustrious contemporaries had not yet noticed: ileus, or slowing of the bowel, was a well recognized feature of peritonitis, but the use of laxatives in this setting was not abandoned until the late nineteenth century;⁶² auscultation of, or listening to, the abdomen to test for the absence

on appendicitis and peritonitis. He performed one of the most famous successful appendectomies on Edward VII a few days before his coronation in 1902. See Owen H. and Sarah D. Wangenstein, *The Rise of Surgery from Empiric Craft to Scientific Discipline* (Minneapolis: University of Minnesota Press, 1978), pp. 139 and 431-32.

61. The stethoscope had been used in Canada since the late 1820s. It had been introduced by Pierre Beaubien who had assisted at Champeau's autopsy. See H.N. Segall, "L'introduction du stéthoscope et de l'auscultation clinique au Canada", *UMC*, 97 (1968): 1115-17. Nelson and his son were already experimenting with ether at the time of Strong's death. See editorials "Le Lethion" and "Du Lethion", *LLC*, 1 (1 Mar. 1847): 20 and (15 Mar. 1847): 25. See also J.J. Heagerty, "Medical practice in Canada under the British Régime," in *A History of Science in Canada*, ed. H.M. Tory (Toronto: Ryerson, 1939), pp. 79-80.

62. A comparison of texts on clinical medicine shows that the use of calomel was still prevalent twenty years later and a decline began only in the late century. Alone in 1866, Austin Flint rejected a calomel and bleeding in favour of opium, for peritonitis. As late as 1877, Trousseau still maintained that calomel was the foundation of therapy in intestinal obstruction for any reason. The transition in practice is reflected in two different editions

of bowel activity as a diagnostic sign rather than as a therapeutic challenge, had been recommended by a Frenchman in 1834, but was not generally used until the twentieth century;⁶³ bleeding was the state of the art.⁶⁴

WHY DID THE DEBATE TAKE PLACE?

Personal reputation and politics played important parts. After the implications that Nelson had erred in his diagnosis and killed by his therapy, it was imperative for him to prove that his diagnosis had been correct and his treatment justified, perhaps even successful. Political ends were served by emphasizing the image of the seemingly innocent French-Canadian, Champeau, and his brutal wounds inflicted by British hands. On the other hand, Holmes, as an academic doctor, the new head of the McGill medical faculty,⁶⁵ and as a conservative member of his community, was constrained to defend both the science of pathological anatomy and the British presence, a bizarre combination perhaps, but one which has been recognized before.⁶⁶ Since the cause of death was not immediately obvious from the autopsy, Holmes sought elsewhere in the clinical record to fix blame on the patient himself, on his doctor or on Fate, on anything but the soldier who had stabbed Champeau.

There was another significant difference between Holmes and Nelson which contributed to the debate: the relative importance they gave to the rights of the individual patient and to the need for therapy. Medical students sent from the colonies to study abroad complained that European academics were more interested in making a diagnosis than in

of Robert Graves' lectures: the first (1843) recommended its use "for the acute inflammation" of peritonitis; the second edition (1848, but reprinted without any alteration in 1884) continued to advocate calomel in conjunction with opium. Two Canadian reports from 1866 and 1882 included calomel in the therapeutic armamentarium. By the turn of the century Wm Osler stated categorically that purgatives should not be given in peritonitis. Austin Flint, *A Treatise on the Principles and Practice of Medicine* (1866), 4th ed. (Philadelphia: Lea, 1873), p. 532-33; Robert Graves, *Lectures on the Practice of Clinical Medicine* (London: Fannin; Edinburgh: MacLaughlin and Stewart, 1843), p. 803 and second edition, 2 vol. (1848; reprint London: New Sydenham Society, 1884), 2: 278-79; A. McPhedran, "Treatment of peritonitis", *Can. J. Med. Sci.* 7 (1882): 262-63; Wm Osler, *Principles and Practice of Medicine*, 4th ed. (London: Young Pentland, 1901), p. 538; E.H. Trenholme, "A case of idiopathic peritonitis", *Can. Med. J.* 2 (1866): 287-89; A. Trousseau, *Clinique Médicale de l'Hôtel Dieu de Paris*, 5th ed., 3 vol. (Paris: Baillière, 1877), 3: 218.

63. Auscultation of the abdomen was slow to be incorporated into physical examination. In peritonitis, as opposed to colic and mechanical obstruction, intestinal activity decreases and the "silent abdomen" is an excellent diagnostic sign. An early paper by Desprez seems to have been completely ignored. Flint gave credit to Hooker for an essay in which intestinal spasm or colic was to be diagnosed by an absence of bowel sounds, the opposite of present opinion. Modern historians, guided by Osler, pick up the thread with the work of Treves, who in 1899, recommended abdominal auscultation during the administration of an enema in order to rule out lower bowel obstruction. Desprez, "Auscultation du ventre dans la Péritonite", *Bull. Soc. Anat. Paris*, 9 (1834): 93; Flint, *Medicine*, p. 475; Ch. Hooker, "An essay on intestinal auscultation", *Boston Med. Surg. J.*, XL (1849), 14 pp; Osler, *Medicine*, p. 536 and Wangensteen, *Surgery*, p. 124.

64. On bleeding see Peter H. Niebyl, "The English bloodletting revolution: modern medicine before 1850", *Bull. Hist. Med.*, 51 (Fall 1977): 464-83; Haller, *American Medicine*, pp. 36-66.

65. Although he had been ill for some time, William Robertson, the former head of McGill, had just died when Nelson launched his broadside against the successor. In fact, Robertson's obituary was the article immediately preceding Nelson's account of Champeau. It seems that this conservative had gained some respect from the liberals of Montreal. His good reputation, delineated as it was in the only medical journal of the time, was quite clearly the "tough act" that Holmes was obliged to follow. Could he strike an equally respectable accord between his conservative leanings, his role as an academic and his now prominent place in Montreal society? See "The late Dr. Robertson", *MMG* 1 (August 1844): 146-47.

66. Barbara Tunis observed that in early nineteenth-century Montreal, the medical profession was dominated by British-trained physicians for whom education and status were closely linked. "Medical education", p. 91.

providing good therapy. Such differences in priorities have been cited as a major factor in the selective transfer of scientific information⁶⁷ and as a reason for the rash of quack medicines that appeared in nineteenth-century America.⁶⁸ In the colony, books, diagnoses and lectures were of no use at all when the light they shed on the individual case came only when it was too late.⁶⁹ Traces of this colonial sentiment are echoed in the Canadian medical journals, especially the anti-establishment *MMG* and *LLC* where large portions of the issues were devoted to therapeutics and the faithful reproduction of “recipes” for new remedies. Chemistry was to serve as a tool for making better medicines, rather than as a tool for the investigation of human physiology.⁷⁰ With respect to peritonitis the increase in articles concerning its therapy can be positively correlated with the rise in American publication on the subject (see Figures 1 and 2).

Nelson, the active colonial practitioner, made a point of informing his patients (and the coroner) of the probable outcome; he made frequent visits; he prescribed. He used scientific “facts” to support his clinical impression and the distortion of these mere “bookish” words to suit a clinical reality was justified by the overwhelming importance of the patient’s need. On the other hand, Holmes, the European-trained academic, snooped sleuth-like through the evidence, suspecting both the patient and his doctor of misconduct and lies.⁷¹ Certainly Nelson’s role in these cases as the attending may have exaggerated these discrepancies, but the very fact that he, not the McGill professor, had been consulted by these desperately ill patients of both ethnic origins recapitulates this difference. Holmes may have been right in his conclusions, but it was Nelson, former rebel and future mayor, who was the city’s champion, regardless of how thoroughly his attentions may have sealed his patients’ fate.

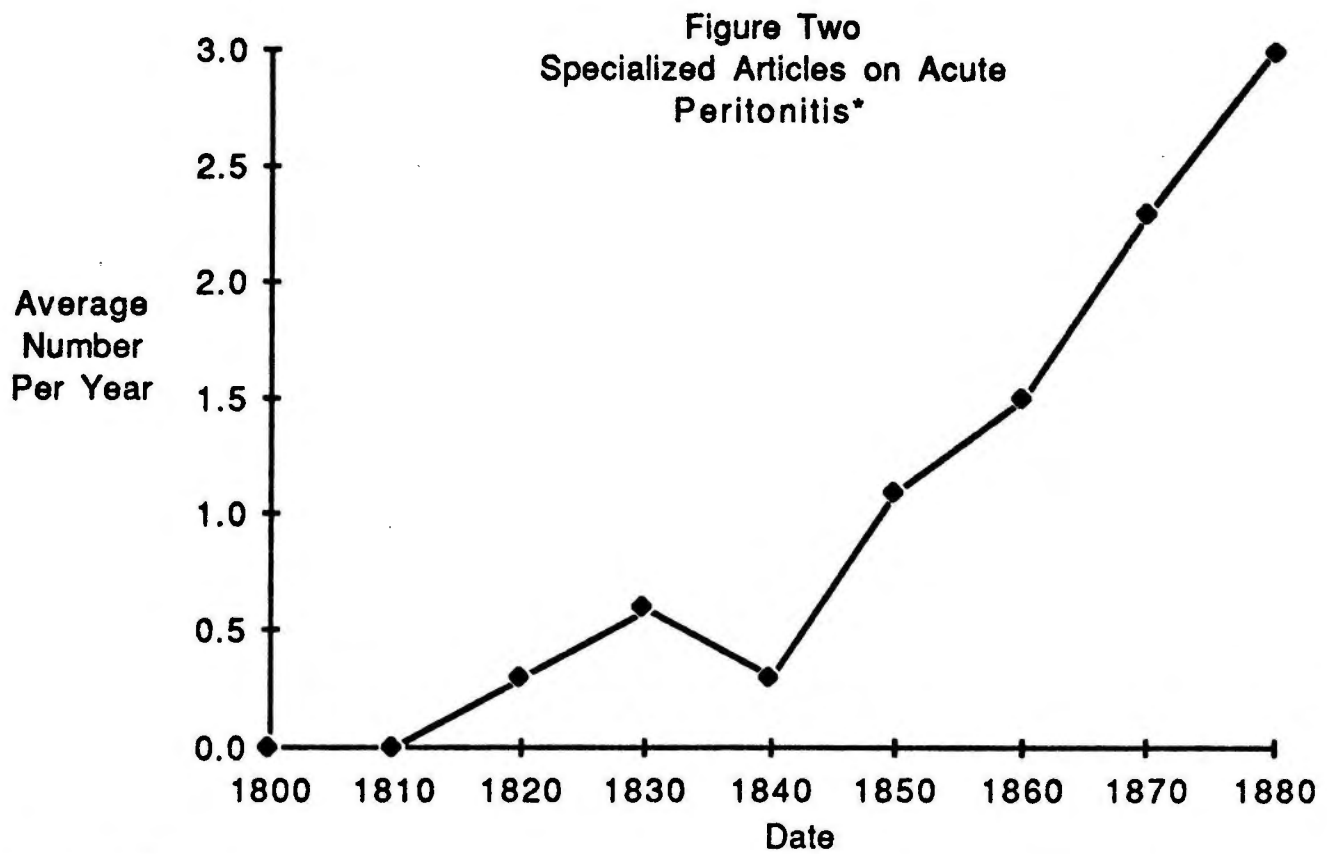
67. John Harley Warner, “The selective transport of medical knowledge: antebellum American physicians and Parisian medical therapeutics”, *Bull. Hist. Med.* 59 (1985): 213-31.

68. Richard Shryock, *The Development of Modern Medicine* (London: University of Wisconsin Press, 1936; reprint ed., Wisconsin, University of Wisconsin Press, 1979), pp. 190, 210 and 249 et passim.

69. The disappointment of a North American father for the lack of therapeutic information in his son’s “European” treatise on cholera is scarcely disguised in his defensive appraisal, James Jackson, *Memoir of James Jackson, Jr.* (Boston: Munroe, 1841), pp. 31 and 96-98. To appreciate these varying priorities one has only to contrast this description with the title of Wolfred Nelson’s own work on cholera, *Practical Views on Cholera and on the Sanitary Preventative and Curative Measures to be adopted in the event of a Visitation of the Epidemic* (Montreal, 1854). “Curative” is a curious word to be applied to cholera, when, even in the antibiotic era, “cure” of cholera is viewed with scepticism and “management” remains the therapeutic jargon of choice. See also note 49 regarding Nelson’s interest in Velpéau.

70. This observation has been made before with respect to other fields. See Taylor Levers, “What is Canadian about science in Canadian history?”, in *Science, Technology and Canadian History*, eds: R.A. Jarrell and N.R. Ball (Waterloo: Wilfrid Laurier Univ. Press, 1980), pp. 14-22, esp. p. 19.

71. Rosenberg has shown how the active practitioners of America may have resisted the European academic shift in the doctor-patient relationship from a bond based on therapy to one based on the science of disease. Charles E. Rosenberg, “The therapeutic revolution: medicine, meaning and social change in Nineteenth Century America”, in Charles E. Rosenberg and Morris J. Vogel, eds., *The Therapeutic Revolution* (Philadelphia: University of Pennsylvania Press, 1979), pp. 3-25, esp. pp. 20 and 25.



*(N=141)

Articles devoted to the cause, diagnosis and (non-operative) therapy.

Source: Index Catalogue Library of the U. S. Surgeon General, 1889