Balloon pneumoplasty, 1926

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Evelyn's problem is intermittent pain — her knee, in particular. Sometimes the pain is in her hip, but then it is much milder. "It's not so bad that I would take anything for it, Doctor. I'd just like it diagnosed."

A little more history, a physical, and I realize that my 80-year-old patient has the hips and knees of someone decades younger. This is referred pain from her facet joints and lumbar discs. She has scoliosis. But what's this? A deep puncture scar on her back, on the right side. I ask her about it. "Oh, that," she explains. "I was 8 years old. I had empyema, and the surgery was done on the kitchen table."

Now this is really interesting to me. Had she been given an anesthetic? Yes, and it was horrible. She can still recall the rubbery smell of the chloroform mask. Who did the surgery? Was a specialist called in? No, the local GP did it. His name was William Hamilton.

In the 1920s in Canada the specialty of respirology was still decades in the future. Chest radiography was expensive, an exciting new "fancy" technology. Did Dr. Hamilton have a Bowles stethoscope, patented in 1897? If so, how did he use it? Rappaport and Sprague's authoritative description of the "physiologic and physical laws that govern auscultation" would not be published for another 15 years. What clinical skills would allow this doctor to diagnose empyema as he examined the cachectic 8-year-old lying on the kitchen table? Did he gently place his hands on her thin chest, checking for tactile vocal fremitus? Did he listen for egophony? Did he search for whispering pectoriloquy? These techniques were described in detail in the leading textbooks of the day — Bartholow's *Treatise on the Practice of Medicine* and Osler's *Principles and Practice of Medicine*. How carefully he must have percussed before stabbing deep into the chest of the critically ill child. Was he thinking of Osler's surgery to drain his own empyema, only 7 years earlier? In medical school, had he been taught the complications of pneumonia, based on Osler's description of 105 cases at the Montreal General Hospital?

Today, a child with empyema would have a very modern (and expensive) set of investigations, especially in a teaching hospital. Blood work, blood gas testing, blood cultures, more cultures "to be sure," radiographs with the patient in various positions to "observe" the fluid moving (or not), a pleural tap for further work-up (including cultures), antibiotics, more expensive antibiotics, possibly a CT scan of the chest and perhaps an immunologic work-up. Perhaps the patient would make a good teaching case: "Why has this young girl experienced *this* complication, at *this* time, in *this* setting, and why do you say this is empyema, not chylothorax?"

In the end, a very neat, sterile stab would be made by a specialist to drain the offending pus, followed, of course, by the insertion of a drainage tube.

The contrast between then and now is not really what compels me to record my patient's story. In truth, as I finish the examination Evelyn remarks, "You know, somebody should write this up."

The most intriguing details are left to the last. There was the year away from school, during which her devoted parents helped her, their only child, to recover. She was nursed at home by 2 graduates of the Toronto General Hospital School of Nursing, at $5 per nurse per 12 hours. Evelyn remembers a crude chest tube, dressings and liberal doses of cod liver oil. This seems to be congruent with Bartholow's advice to administer "[a] succession of flying-blisters, [and] painting with the tincture of iodine" and his observation that "[the] best results are obtained, not from the use of supposed stimulants of the absorbents, but from means to promote the nutrition ... [such as] iodide of iron (sirup), cod-liver oil ... ." (page 374). But it was Dr. Hamilton's idea that she blow up balloons — many bal-
loons — so that her lungs would heal and she would grow to be a strong young woman. The ingenuity of this deserves to be recognized. And we might wonder just how difficult it was to obtain a gross of balloons in 1926. She describes her father encouraging her, and the room filling up with balloons as proof of her perseverance. Remember, there were no incentive spirometers, no chest physiotherapists and no pediatric respirologists to help with her recovery.

As for Dr. Hamilton, I have discovered that he graduated from the University of Toronto’s medical school in 1901, practised medicine during the first half of the century at 301 Broadway Ave. in Toronto and died on Nov. 14, 1963. I have been unable to find any tribute to him in the medical literature. So, for you, Dr. Hamilton, and for you, Evelyn, a healthy 80-year-old woman with no heart or lung disease, no tragic history of 72 years of ill health with recurrent chest infections and chronic lung disease, here it is. Written up.

I thank Mr. John Schmitz, archivist of the College of Physicians and Surgeons of Ontario, for providing the details regarding Dr. Hamilton. I also thank Dr. M. Lhotsky for referring the patient to me for an opinion on her joint pain.

This article is dedicated to my first medical teachers: my mother, Helen Catherine Childs Howard, BA (Medical Laboratory Science), and my father, David Lloyd George Howard, on the 50th anniversary of his graduation from the Faculty of Medicine at the University of Toronto in 1948.

References

2. Bartholow R. A treatise on the practice of medicine for the use of students and practitioners of medicine. 7th ed. New York: Appleton; 1890.
3. Osler W. The principles and practice of medicine. New York: Appleton; 1892. [The third edition, published in 1898, would have been available during Dr. Hamilton’s first years at medical school.]