

History of Canadian Anaesthesia

W. Easson Brown (1894-1957)



Since 1848, when John Snow began to investigate a series of volatile substances in the hope of finding the ideal anaesthetic, the search has continued for replacements for anaesthetics in current use. Research to this end was particularly active in the 1920s, before intravenous agents had been synthesized. Propylene and ethylene and then cyclopropane were of great interest, and much of the initial work on these agents was done in Canada. One of those who studied them was W. Easson Brown, of Toronto. Although he narrowly missed gaining the fame that comes with the introduction of an anaesthetic that finds use in clinical practice, his story is worth retelling.

The use of ethylene as an anaesthetic was reported in 1923 by two teams – in Canada by Brown, working at the Toronto General Hospital, and Velyien Henderson, professor of pharmacology at the University of Toronto, and in the United States by A. Luckhardt and J.B. Carter. Brown and Henderson were also interested in propylene, as was G.H.W. Lucas, a biochemist who had worked with Sir Frederick Banting. Propylene, however, seemed to be toxic, and Lucas set out to find out why. Lucas suggested that the toxicity might be related to the presence of the isomer of propylene, cyclopropane, and he and Henderson then investigated the nature and effects of cyclopropane in the laboratory. Although it was difficult to prepare it in purity and quantity, the results of their experiments – except for some unfortunate explosions – justified Henderson's presenting an initial report to the Canadian Medical Association meeting in June 1929. This report was heard by two anaesthetists who would each become famous – Ralph Waters, of Madison, and Harold Griffith, of Montréal, where the meeting was held.

Lucas's goal was to develop cyclopropane as a safe anaesthetic for clinical use. Henderson, having agreed to be anaesthetized with cyclopropane, Brown, as the anaesthetist, became the first to administer it to a human being. After this, a demonstration somewhat reminiscent of those popularized in the Bristol Pneumatic Institute more than a century earlier, was then arranged, at which various noteworthies were anaesthetized, Banting among

them. All should have been well, and the Toronto team, with Brown as the anaesthetist, might well have achieved priority in the clinical use of cyclopropane. But, said Lucas, "at this juncture our luck changed." Two forces, both in Toronto, conspired against them. One was the occurrence a little earlier of three deaths associated with the use of ethyl chloride, another volatile agent, with attendant publicity; the other, linked to these events, was the refusal of Samuel Johnston, then the head of anaesthesia at Toronto, to approve Brown's request to use cyclopropane in the Toronto General Hospital. So what might have become one of the brightest of chapters in Canadian anaesthesia never came to be written.

Henderson, like Lucas and Brown, never lost faith in cyclopropane, but he realized how solid was the obstacle to further work on it in Toronto. So he encouraged his friend Ralph Waters to continue the work on cyclopropane, and thus, to quote Lucas again, "It remained for others at a later date to investigate the anaesthetic value of this gas in surgery." So it was Waters, and not Brown, who gained the credit for being the first to use this most useful agent in clinical practice. Waters gave a preliminary report on its use in 1933, the same year in which Griffith, in Montréal, became the first Canadian anaesthetist to use it clinically.

Brown was in fact doubly unfortunate: the same resistance from some of his medical colleagues that had blocked his use of cyclopropane prevented him from using ethylene clinically. He was, nevertheless, a fine anaesthetist, courageous enough to apply new techniques if they seemed to be in the best interest of his patients, and he richly deserves a word or two in the annals of anaesthesia.

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