

netic counseling at a certified malignant hyperthermia center,<sup>2</sup> it is not uncommon for anesthesiologists to counsel and anesthetize such patients. Often, patients are advised of their possible genetic disposition and a trigger-free general or regional anesthetic technique is used, with safe results.<sup>2</sup>

Anesthesiologists are often in the difficult position of meeting a patient for the first time minutes before the start of a procedure and do not have all of the patient's relevant medical information. There is a clear need for assistance when it comes to genetic counseling. We hope that in the days of personalized medicine, anesthesiologists will better educate themselves in genetics as it relates to anesthetic practice, seek the expertise of colleagues in medical genetics departments, and foster a pragmatic relationship for the benefit of patients.

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## The Discovery of Chloroform: Has David Waldie's Role Been Exaggerated?

*To the Editor:*

It is now commonly accepted that James Y. Simpson, (1817–1870), professor and chairman of the Department of Midwifery at Edinburgh University (Scotland), tried chloroform after it was suggested to him in October 1847 by David Waldie, L.R.C.S. (Edinburgh; 1813–1889), pharmacist in Liverpool. Likewise, it is commonly accepted that Simpson was ungenerous in acknowledging his friend's contribution to the discovery.

Indeed, a brief footnote in Simpson's first account of the discovery<sup>1</sup> stated, "Waldie had mentioned the perchloride of formyle (chloroform) among others as worthy of a trial." In the same footnote, Simpson warmly thanked his assistants, J. Matthews Duncan, F.R.C.S. (1826–1890), and George Keith, as well as William Gregory (1803–1858), who had suggested the chloride of hydrocarbon (Dutch liquid) and given him samples of various compounds to try. Gregory was chairman of the Chemistry Department at Edinburgh University. Duncan and Keith had studied midwifery under Simpson.

However, a review of the facts surrounding the discovery of chloroform leads us to question the importance of Waldie's contribution and the extent of Simpson's ingratitude. The reminiscences of Duncan and James Miller (1812–1854), professor

of surgery at Edinburgh University, never mention Waldie. In addition, throughout the years after the discovery, Simpson repeatedly thanked Waldie.

In early 1848, Miller, who was a professor of surgery at Edinburgh University and neighbor of Simpson, described the evening of November 4, 1847, as it was reported to him by participants.<sup>2</sup> Although Simpson initially discarded the chloroform as "too heavy," he later changed his mind and retrieved it from the wastebasket. Miller does not mention Waldie.

Duncan, who was then a lodger and one of Simpson's assistants (later becoming a renowned obstetrician in Edinburgh then in London), gave a different and more detailed version of the events in a March 6, 1870, letter to Robert Christison (1797–1880), a professor of toxicology and medical jurisprudence at Edinburgh University.<sup>3</sup> A copy of that letter was sent by Duncan's widow to the *British Medical Journal* in 1896.<sup>4</sup> The letter indicates that, a few days before the discovery, Simpson and Duncan visited Gregory, who gave them samples of various compounds. Duncan inhaled several of them on the morning of November 4, 1847. He found chloroform to be "the most interesting of them" and brought it to Simpson's dining room that evening. He reported that he had forgotten the name given to the compound, but that "it certainly was not chloroform." It probably was perchloride of formyle.<sup>1</sup>

Duncan's sister Isabella, in two short posthumous biographies of her brother,<sup>5–7</sup> added that he had been unconscious for 15 min after he had inhaled chloroform. It was this response that prompted him to suggest it to Simpson. She indicated that her brother had been hurt when Simpson ignored his important role in the discovery although he had never complained. Duncan, too, never mentioned Waldie.

Thus, both Miller and Duncan ignored Waldie.

In a lecture given to the Liverpool Literary and Philosophical Society on November 29, 1847,<sup>8</sup> Waldie complained of Simpson's lack of acknowledgment. Possibly encouraged by family and friends, he was more emphatic in a pamphlet published in 1870 after Simpson's death.<sup>9</sup> But Waldie was unfair to his late friend who had profusely thanked him in a letter accompanying his account of the discovery<sup>1</sup> he had sent him in 1847.<sup>10</sup> Simpson also frequently mentioned Waldie's name in his lectures to medical students.<sup>9</sup>

In a letter to his Liverpool colleague John Abraham (1813–1881), pharmacist at Clay & Abraham Co., Waldie admitted that Simpson's acknowledgment "had been handsome."<sup>11</sup> Waldie was thus amply thanked for a mere suggestion he had offered in October 1847.

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