Volume 20, Number 4,
September 2005

2005 CAS Medical Student Prize Winner

Dismantling Pain: Lessons From the Early Years of Anesthesia

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If one were to compare the modern practice of anesthesia with its practice 150 years ago, when anesthesia was still in its infancy, the most significant difference is likely not to lie in the anesthetic technique or agents. The great difference is likely to lie in the nature of pain itself. 150 years ago, pain was attended by its own mythology. Centuries of disease and painful "cures" had left their scars in the shape of a social consciousness that pain had its purposes. Contemporary logic suggested that if pain were instrumental, then its presence ought to be preserved. Although this notion may seem archaic, the fact that chronic pain has become an immense crisis today suggests that the argument that pain has purpose may not be altogether dead. The argument has merely shifted from the forum of intellectual or religious debate into the realm of the psychological. Early anesthesiologists had to convince their culture that the alleviation of pain was something worthy of pursuit. To do so, they had to dismantle the myths surrounding pain. The fact that anesthesia exists today as a specialty is a clear indication of their success.

Anesthesia's formal introduction to the practice of surgical medicine came during a public demonstration in 1846. A Boston dentist by the name of William Morton offered up for public scrutiny the efficacious effects of ether on the removal of a tumour. The success of this surgery — which prompted the surgeon Dr Warren to scientifically pronounce, "Gentlemen, this is no humbug"[1] — launched the contentious era of surgical anesthesia. While we cannot quite credit Morton with the discovery of anesthesia, he was nevertheless the one to convince the world of its utility.[2] Decades before him, the anesthetic agent nitrous oxide was discovered by Humphry Davy and, in addition to its medical purposes, was being used to titillate the English romantic poets Robert Southey and Samuel Taylor Coleridge. Nitrous oxide and ether soon led to the discovery of chloroform, which was put to quick use by British gynecologist James Simpson to ease the pains of labour.

The remarkable potential of the early anesthetic agents to alleviate surgical and labour pain was not an immediate boon to many physicians and patients alike. The prospect of a less-than-excruciating childbirth experience was tempered by the failure of James Simpson to recognize the potentially lethal effects of chloroform. Thankfully for anesthesia — not to mention modern-day aficionados of Victorian culture — that lesson did not come at the expense of Queen Victoria's life, to whom chloroform was administered by James Snow on the birth of Prince Leopold.

Ether fared no better. In this case, it came under suspicion when its promoter, William Morton, was quick to capitalize on it after its success in the 1846 demonstration. He moved to patent his "Letheon Gas" and sought to enrich himself by selling the rights to use his discovery.[3] This unrestrained profit-seeking was at odds with the professionalism of medicine in its day. The medical press began to ring with reports of quackery where Morton's patent was concerned. Naturally, this did not advance the cause of anesthesia very far.

But objections to the notion of painless surgery ran far deeper than objections to the technology itself or the manner in which it was marketed. "The danger lies in the anesthesia

rather than in the anesthetic," remarked one New York physician.[4] Along with love, pain is perhaps the most enduring human reality. Millennia of attempts to alleviate it had resulted in some successes tempered by many failures, much deep suspicion and hostility within the profession, not to mention a public made impatient by the ups and downs of promises made and unfulfilled.[5] The cumulative result of such unfruitful encounters with pain remedies was naturally to focus on the utility of pain, and where none was obvious, to create it.

To feel pain implies that, whatever pathology is present, the body's hardware is still sufficiently intact to detect its malfunctions. Pain is therefore indicative of vitality. Some nineteenth-century physicians went so far as to endorse that any attempt at diminishing sensibility opened itself to charges of diminishing life itself.[6] Surgeons used the degree of perioperative suffering as a marker of the success of the surgery. "The man seeming to suffer comparatively little during the operation — a circumstance which is generally considered rather unfavourable," was the description one physician gave to an amputation in 1830.[7]

Some went further and called pain curative. The theory of counterirritation rested on this principle. This doctrine, developed by British surgeon John Hunter, claimed that therapy had to be painful in order to work.[8] One evil force was seen to drive out another evil force. No two evils (ie diseases) could exist in one person simultaneously, so to apply the evil of pain must necessarily drive out the primary disease. Blistering the skin with chemical burns was a favourite technique of medical counterirritation. The "science" to this approach is quite unremarkable: distract a person with a focus of intense pain and they'll forget their own name, let alone their gout.

The distractive force of pain has been capitalized upon multiple times in the military tradition, where anesthesia was especially hotly contested. It was argued that attempts to ease suffering would function to snatch from troops the essential opportunity to become immune to the pains of battle and all the miseries of their position.[9] But there were other, more powerful, reasons for keeping anesthesia out of the battlefield. Implicit in the notion of the wartime hero and all its attendant glories was the expectation that the gentleman experience his pain like a man. In this respect, pain was imbued with a moral force and to alleviate it was considered a "mistaken philanthropy".[10]

In the highly moralistic nineteenth century, the sickbed itself was seen as a kind of moral battleground where good and evil duked it out. One rather extreme surgeon advised his patients before cauterizing their cancers "that, unless they had fortitude enough to bear to have their arm chopped off, inch by inch, on a block, or to hold it out like the Roman youth of old, while it burnt off on the altar, they need not expect to have their cancer cured — that its moral Ôfinal cause' was to develop such heroism in them."[11]

Many physicians and patients believed that the moral meaning of pain was particularly pertinent to the pains of childbirth. A minority of nineteenth-century churchmen and women connected the pains of parturition with the inheritance of women post-Garden of Eden. As such, painful labour was not only natural, but the will of God. The home of James Simpson, the early pioneer of chloroform in obstetrics, was the Calvinist heartland of Scotland, where 250 years earlier a woman had been publicly burned in Edinburgh because she asked a midwife to give her something to allay the pain of childbirth.[12] However, sometimes painful childbirth worked in favour of women. Where pain is regarded as moral, and where childbirth is intrinsically painful, it is only a few steps to the conclusion that women are morally superior to men.[13]

In a social climate in which women wielded very little power, pain had the potential to

become a moral weapon, not a curse. That history and literature are full of examples of pain — physical and otherwise — conferring power on the sufferer is a statement that scarcely needs supporting. As D B Morris states in his book *The Culture of Pain:* "Pain has always served and continues to serve specific social and ethical purposes. Indeed, as a species we show an endless ingenuity for discovering new uses for pain within the recurring structures of formal or informal rites."[14]

As pain becomes increasingly understood in terms of neurotransmitters and nerve endings, those uses for pain of which Morton speaks have gone underground into the human psyche. The mythology around pain has become de-articulated. It is no coincidence that this is happening just at a time when chronic pain conditions are so endemic in our society. The latest wonder drug will probably not hold the answer to the treatment of this kind of pain, just like the early anesthetic agents did not hold the answer a century ago. Arguments in favour of pain had first to be dismantled; only then could the power to alleviate it be claimed.

Today's anesthesiologists who care for patients with chronic pain might consider themselves as inheritors of a task analogous to the one of their nineteenth-century forebears: to expose the purposes pain serves to individuals and to society as a whole. It may be that the next new direction in pain management will not involve the marketing of a new "Letheon Gas", but a softer approach that involves encouraging patients to affect encounters between pain and meaning. And that, gentlemen (and women), might not be humbug.

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