

Snow — at Christmas

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Christmas this year will be marked for us by the arrival of our first grandchild, so as a mother and obstetrician I am receiving a steady stream of questions from my daughter on pregnancy-related matters — not the least of which relate to the use of analgesia in labour. At her antenatal classes, the advice has been to draw up a birth plan: warm baths, movement, partner support, and later, possibly, reluctantly, epidural ... But if I *do* want an epidural, she asks, will it be available even at Christmas?

Christmas is also the time for celebrating the birth of Christ — which led me to wonder about the obstetric details of this event. There is little precise information available to us. Luke 2:4-7, though the author was himself a physician, gives but a brief historical account:

... Joseph ... went up ... unto ... Bethlehem ... with Mary his espoused wife, being great with child ... while they were there, the days were accomplished that she should be delivered. And she brought forth her firstborn son, and wrapped him in swaddling clothes, and laid him in a manger ...

(All Bible quotations given here are from the King James Version.)

Although there was clearly a birth plan, this was heavenly and long-term, rather than a matter of maternal choices. Presumably the delivery was a spontaneous vaginal one, with a cephalic presentation and rapid labour — possibly initiated by the long donkey ride to Bethlehem. There would have been few facilities for intrapartum care in a stable, and, although angels were in evidence, we are not told of the presence of any human support other than Mary's husband. The third stage of labour was probably uncomplicated — depictions in religious art always show the mother of Jesus as serene postpartum, with no hint of exhaustion or exsanguination.

What can be said with certainty is that for the Madonna there was little in the way of pain relief in labour, and that this situation would continue for women in childbirth for nearly two thousand years. Not only was effective medication lacking, women also had to contend with the curse of Eve — a belief that the pain of labour was women's lot following Eve's succumbing to temptation and her subsequent banishment from the Garden of Eden. In Genesis 3:16, God declares sternly, "... in sorrow thou shalt bring forth children". And so, for hundreds of years, women brought forth children with only the support of other women for relief from pain, and many men, particularly clergy, regarded pain in childbirth as evidence of God's moving in mysterious ways that should not be questioned.

Fortunately, all this finally began to change in the middle of the 19th century, thanks largely to Queen Victoria and a remarkable medical practitioner named John Snow. Victoria, mother of nine, has often been depicted as disliking sex ("lie back and think of England!" is frequently attributed to her), but immediately after her marriage in February 1840 she wrote to her Uncle Leopold, King of the Belgians, that she was the "... happiest Being that ever existed", and within days she conceived her first child, the Princess Royal, born in November that year.¹ She was no wimp — despite "all the ennuies" of pregnancy, she worked until close to each birth — but she was not amused by the experience of labour.¹ After her first delivery, she remonstrated with Leopold that "men never think ... what a hard task it is for us women to go through this *very often*".¹ Later, when her eldest daughter was herself married,



The Nativity, by Petrus Christus, circa 1450. ◆

Victoria wrote to her of the "heavy trials" and "cruel sufferings" that labour entailed,^{2,3} and commented that:

... the pride of giving life to an immortal soul is very fine ... but I own I cannot enter into that; I think much more of our being like a cow or a dog at such moments; when our poor nature becomes so very animal and unecstatic.²

Nevertheless, her letters show that she adored her "Angel" — her consort, Prince Albert — and was devoted to all her children.¹

In London in 1847, Dr John Snow began to experiment with ether, which dentist William Morton had successfully demonstrated as an anaesthetic to an interested Boston audience the previous year.⁴ Born in 1813 to a poor Yorkshire family and apprenticed at age 14 to a surgeon, Snow later studied medicine at the Hunterian School of Medicine in London.⁵ He was a vegetarian, a teetotaller and, by his own admission, celibate all his life, devoting his energies entirely to his profession.⁶

Snow was one of the first to calculate appropriate dosages of ether; he devised his own apparatus for its administration and soon had

“the busiest ether practice in London”.⁶ He was also interested in chloroform, introduced by James Simpson of Edinburgh in 1847 for obstetric and surgical anaesthesia, and he wrote about both drugs.^{7,8} Simpson, as well as taking a clinical interest in pain relief for childbirth, also confronted the Church’s objections, quoting from Genesis 2:21-22 the story of Eve’s creation from Adam’s rib:

... the Lord God caused a deep sleep to fall upon Adam ... and
He took one of his ribs ... and the rib ... made he a woman.

Thus, said Simpson to his opponents, did God condone the use of anaesthesia.⁹

Victoria and Albert initially expressed interest in chloroform for childbirth in 1848. However, the Royal physicians, Dr Charles Locock and Sir James Clark (a man described as “a walking medical calamity”), had grave concerns about the safety of the drug, so the birth in 1850 of Victoria’s seventh child, Prince Arthur, took place without anaesthesia.⁶ Over the next 3 years, Snow’s reputation as a safe anaesthetist grew, and, in early April 1853, with the arrival of another child imminent, Albert summoned him to Buckingham Palace for a private conversation. Three days later, the Queen commenced labour, and Snow was again called to the Palace. Subsequently he wrote:

April 7, 1853 — Administered ... to the Queen in her confinement ... a little chloroform with each pain ... on a folded handkerchief Her Majesty expressed great relief from the application [and] appeared very cheerful and well, expressing herself much gratified with the effect ...⁶

The Queen indeed found chloroform “delightful beyond measure”, and the child, Prince Leopold, was born healthy. The editors of the *Lancet*, however, were not amused. “Intense astonishment ... has been excited throughout the profession by the rumour that her Majesty during her last labour was placed under the influence of chloroform, an agent which has unquestionably caused instantaneous death in a considerable number of cases”, they thundered.¹⁰ The *British Medical Journal* hit back at its rival, asserting that “when well controlled and supervised, the use of chloroform is safe”, and by the 1860s, using chloroform in both obstetrics and general surgery was standard practice.¹¹

In 1857, at the birth of her last child, Princess Beatrice, the Queen again used chloroform, once more administered by Dr Snow. “Her Majesty is a model patient”, Snow declared, but very properly declined to comment further on his conduct of either case. The Royal approval much enhanced his professional reputation, and chloroform in childbirth became respectable, being referred to as anaesthesia *à la reine*. The notion of pain relief in labour was here to stay.¹²

Snow died in 1858, aged just 45, but left an enduring medical legacy not just confined to his contribution to anaesthesia. In 1854, he had investigated an outbreak of cholera in his London neighbourhood of Soho, becoming convinced — well before the germ theory of disease was accepted — that the source could be traced to water from a public pump in Broad Street. He persuaded a sceptical municipality to remove the pump’s handle — whereupon the epidemic abated. He thus made a significant contribution to epidemiology, as well as to the realisation that plagues and epidemics were not, in fact, the work of a wrathful God.⁶

Chloroform continued to be used in childbirth until the 1970s, joined by narcotics such as pethidine, nitrous oxide–oxygen mixtures, and other self-administered analgesics. Since the 1960s, increasingly sophisticated techniques of epidural analgesia have been developed.^{5,12} Currently, 90% of Australian women having



their first child have some form of pharmacological pain relief in labour.¹³⁻¹⁵

However, with the growth since the 1980s of a movement critical of the medicalisation of childbirth, opinions on the acceptability of pain relief in labour have become polarised. Now, instead of the doctrine of the divine necessity of pain in labour, we have the view that experiencing pain is a woman’s right, and that accepting analgesia diminishes the experience of childbirth. “The easy availability of analgesia”, says one advocate of this viewpoint, “can reinforce the medical notion that women’s bodies are intrinsically defective”.¹⁶ Not so, respond some obstetric anaesthetists — epidurals are “the gold standard ... you can participate in the experience, you can push the baby out, and it takes the pain away”.¹⁷ Had it been possible, Queen Victoria would almost certainly have ordered one.

So, what advice should I give my daughter? The same that I would give all women. There is no right or wrong way to have a baby, be it in a stable or a tertiary-level hospital — there is just the best way for you. Epidurals are effective and safe, and available even on Christmas Day. Be well informed, keep an open mind, make the decisions that seem right for you at the time, and do not be tempted to regret them later; the most important thing is a healthy baby and a healthy mother.

We will welcome our Christmas arrival with joy.

Competing interests

None identified.

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