

Case histories

Ovarian cancer

On Christmas Day 1809, as the residents of Danville, Kentucky, sang carols in their churches, Jane Todd Crawford prepared for a terrible ordeal. 46 years old and the mother of four children, Crawford believed she was pregnant again with twins, but the full term had passed and her belly continued to swell. On Dec 13, 1809, she consulted the surgeon Ephraim McDowell, who diagnosed a massive ovarian tumour. Born in 1771, McDowell studied medicine in Virginia and Edinburgh, where he might have read John Hunter's discussion of surgery for ovarian cancer. Since 1795 he had worked as a jobbing surgeon in Danville—a remote American town on the western frontier, where he could practise free from the conservatism and restraint of metropolitan surgery.

After making his diagnosis, McDowell offered to operate, but with no great hope of success: "Having never seen so large a substance extracted, nor heard of an attempt, or success attending any operation such as this required, I gave to the unhappy woman information of her dangerous situation." Crawford accepted the offer, and rode 60 miles on horseback to McDowell's house in Danville. He arranged the surgery for Christmas morning and gave Crawford a dose of opium before making a large incision in her abdomen. In his case report Macdowell described what happened next: "The tumor appeared full in view, but was so large we could not take it away entire. We took out fifteen pounds of a dirty, gelatinous looking substance. After which we cut through the fallopian tube, and extracted the sac, which weighed seven pounds and one half."

McDowell insisted on scrupulous cleanliness, and he and his assistants rinsed Crawford's intestines in warm water before

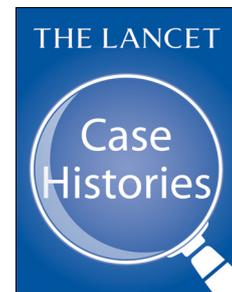
closing the wound. 5 days later she was out of bed, and she lived another 32 years. Over the next few years, McDowell undertook ovariectomies on two unnamed black women—possibly slaves, though we know very little about them—and in 1817 published an account of his cases. This provoked a vicious controversy, many surgeons criticising McDowell for his recklessness, and he seems to have performed no more ovariectomies before his death from peritonitis in 1830.

This story of the first successful ovariectomy is often told as a tale of humane heroism—McDowell's skill and audacity, Crawford's courage and endurance—but it also highlights the sheer difficulty of diagnosing and treating ovarian cancer, a challenge that has persisted into the 21st century. As the literary critic Susan Gubar observed in a memoir of her struggle with ovarian cancer, the early symptoms—bloating, fatigue, pelvic pain, constipation—can be easily dismissed, and the disease has long been framed as a "silent killer".

In the late 19th century four factors led, gradually, to a shift in attitudes and approaches. Cancers of all kinds became more culturally visible, with new specialist hospitals, research institutions, and public campaigns for funding. Cell theory began to provide insights into the basic mechanisms of cancer, and the functions of the ovaries. Surgery entered its imperial phase, as surgeons sought to capitalise on the achievements of anaesthesia and antisepsis by expanding the scope and curative power of their interventions. Finally, and most equivocally, scientific medicine began to claim a new role in defining the differences—physical, emotional, intellectual—between men and women. While some surgeons practised "total abdominal hysterectomy" as a radical treatment for ovarian cancer, others used "normal ovariectomy" as a way of regulating what they deemed to be unruly behaviour.

The story of ovarian cancer in the 20th century, like that of so many other cancers, is a war on many fronts, as new disciplines such as genetics, virology, and endocrinology have framed and studied what Patrice Pinell has called different "cancer objects". Since the work of the Scottish surgeon George Beatson in 1895, clinicians have recognised a connection between some forms of ovarian and breast cancer, and more recent genetic research has highlighted the role of the *BRCA1* and *BRCA2* genes in both diseases. Many health services now offer screening programmes combined with the offer of prophylactic oophorectomy for those found to carry the mutation. As with so many other cancers, though, a warranted sense of therapeutic optimism must be balanced against the late diagnosis, stigma, and disfigurement many patients still experience.

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For more on **Case histories** see **Comment Lancet** 2016; **387**: 211 and **Perspectives Lancet** 2016; **387**: 217 and 737



Ephraim McDowell by Patrick Davenport

Further reading

Gubar S. *Memoir of a debulking woman: enduring ovarian cancer*. New York: WW Norton & Co, 2012

Gardner KE. *Early detection: women, cancer and awareness campaigns in the twentieth-century United States*. Chapel Hill, NC: University of North Carolina Press, 2006

McDowell E. *Three cases of extirpation of diseased ovaria*. *Eclectic Repertory and Analytical Review, Medical & Philosophical* 1817; 7: 242–44