



## Lister's antiseptic technique

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**D**r Charles Webster,\* a physician from Yarmouth, NS, wrote an article in the *Nova Scotia Medical Bulletin* in May 1933, in which he recounted a historic operation that he assisted in in the early 1880s at age 16. At the time, Charles was apprenticed to his father, Dr John Webster, for a 3-year stint before attending the College of Physicians and Surgeons in New York.

I have always remembered the remarkable appearance of the woman presenting [with] the typical signs of ovarian cyst in a far advanced state, and almost never seen to-day. The dark colour, the emaciation, and the extremely distended abdomen were striking.<sup>1</sup>

The patient's physician, Dr John Harris, lived in Beaver River, 2 hours by horse north of Yarmouth. Dr Harris had asked Dr Edward Farrell, the first professor of surgery at Dalhousie University in Halifax, to come and operate. At this operation Dr Farrell planned to demonstrate a new antiseptic technique researched by Lord Lister. Lord Lister's initial findings had been published in 1867 in a paper entitled "On the Antiseptic Principle in the Practice of Surgery."<sup>2</sup> His antiseptic technique had a number of detractors over the following decade, but Lord Lister persisted and was able to prove its great value in decreasing postoperative mortality due to infection.

Charles Webster reminisced that up until that point no doctor from Yarmouth had ever taken any antiseptic precautions, although his father had read about the concept in the *New York Medical Journal* and wanted to see the new technique that would cause "the dark border of mourning to disappear from the fingernails of the modern surgeon."<sup>1</sup>

The operation was to be performed in the patient's Richmond Road home and, on the appointed day, had to be delayed while Dr Harris returned to his office to get alcohol for the lamp that would vaporize the carbolic spray. As they waited, Charles Webster was busy observing. He described Dr Farrell as being in his forties, with a ruddy complexion and of medium height and spare build. He also noted that Dr Farrell was clean-shaven except for a mustache, whereas all the other doctors had beards. The doctors assisting and observing Dr Farrell were Dr John Webster (who administered the chloroform) and Drs Harris and Farish. Charles' job was to empty and fill

basins with water and carbolic solution. Where Charles was to empty the basins was apparently left unclear, but a washtub underneath the operating table seemed the likely place.

Charles described Lord Lister's antiseptic technique:

The carbolic acid spray was set up and the instruments laid in carbolic solutions and antiseptic dressings laid out. Stands and table were wiped with carbolic solution and every precaution taken to insure no infection. The Doctors were instructed as to the care to be taken in touching anything and they were required to wash through three solutions. The spray was turned on before the incision and directed so as to fall over the belly and the whole air was pervaded with the odour of carbolic acid.<sup>1</sup>

During the operation, Dr Farrell tapped the cyst and drained its contents into the tub beneath the table. When the flaccid cyst was cut out it was added to the tub as well. After the patient was put to bed and the instruments were cleaned, the tumour and its contents were weighed. The accumulated material weighed more than 100 lbs! It was a record weight for an ovarian cyst. Dr Farrell was puzzled until Charles shed some light by revealing he had emptied 6 basins of water into the tub. Dr Farrell then deducted the weight of the 6 basins from the earlier figure and came up with an ovarian tumour weighing 64 lbs—a good size but not a record.

The continuing medical education demonstration, hailing from Dalhousie University, was a success. Undoubtedly, antiseptic technique did save future lives in Yarmouth County. Unfortunately, this particular patient did not survive the postoperative period. The cause of her fatal complication was not recorded.

After his return to Yarmouth, Dr Charles Webster continued his lifelong quest for medical education. In 1917 he became one of the first Nova Scotians to become a Fellow in the American College of Physicians and Surgeons. 🌿

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**Competing interests**  
None declared

### References

1. Webster CA. Changing surgery. *Nova Scotia Medical Bulletin* 1933;12(5):252-4.
2. Garrison FH. *History of medicine*. Philadelphia, PA: WB Saunders; 1960. p. 590.

\*Dr Charles Webster was fourth in a direct line of Webster-family doctors to practise in southwestern Nova Scotia. The patriarch, Dr Isaac Webster, began practising in Cornwallis, Kings County, in 1791. Dr David Webster, sixth-generation physician, is currently practising in Yarmouth.

We invite you to submit articles or topic ideas on the history of medicine. Please contact Dr Ian Cameron at [ian.cameron@dal.ca](mailto:ian.cameron@dal.ca) for more information.