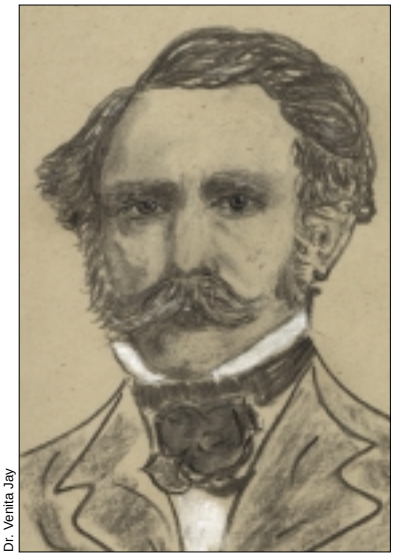
This month in medicine: ether day

One hundred-and-fifty-three years ago this month, an historic operation took place in the amphitheater of the Massachusetts General Hospital. The surgeon in question was John Warren and the patient was a young man named Gilbert Abbott. On that fateful Friday morning of Oct. 16, 1846, William Thomas Green Morton administered ether to the young man, who was undergoing neck surgery.

Although ether eased patients' pain and forever changed the face of surgery, its introduction also involved a battle of claims and counterclaims. For William Morton, the controversy began after he watched a public demonstration by Horace Wells in 1845. Wells administered nitrous oxide to a patient who was having a tooth pulled. Unfortunately, the patient screamed, perhaps due to incomplete anesthesia. The demonstration was a failure, but it left a very definite impression on Morton (1819–68), Wells' former pupil.



Dr. Venita Jay

William Morton

Morton appreciated nitrous oxide's potential as a surgical tool, but sought a more powerful vapour. At the suggestion of Charles Jackson, he proceeded to use ether. Encouraged by a painless tooth extraction, Morton then approached Warren and asked for permission to use ether during a surgical operation.

Morton appeared a few minutes late for surgery on that long-ago Friday morning. He applied his apparatus to the mouth of the patient for about 3 minutes. Warren made a 3-inch incision and waited for the scream that always accompanied surgery. None came. Warren then proceeded with his work, and although the patient uttered incoherent words, he felt no pain. Warren's remark following the surgery became famous: "Gentlemen, this is no humbug." Thus, a new era in surgery was born.

The report of the tooth extraction, with Morton administering the ether, appeared in 1846. Although Crawford Long had first used ether as an anesthetic in 1842 during the removal of a neck lesion, he failed to publish his results until 1849. Apparently, the rush to publish wasn't what it is today.

The pioneers who made medical history because of ether experienced terrible personal tragedies. Long, whose contribution went unrecognized for years, died of a massive stroke. Wells committed suicide, while Jackson was institutionalized for the last 7 years of his life. Morton died of a cerebral hemorrhage. — *Dr. Venita Jay*, Toronto

BC embraces less-invasive breast biopsy system

About 50% fewer core breast biopsies will be performed surgically in BC this year than in previous years thanks to a new MIBB (minimally invasive breast biopsy) system. The main goal is to carry out biopsies earlier, faster and less expensively. The $330 000 machine at the British Columbia Cancer Agency (BCCA), which was bought with donations and funding from the Ministry of Health, has been used to obtain specimens from about 54 women since it was installed in April. Similar machines are in use in Ontario and Quebec, but have been used on fewer patients.

The MIBB system has several advantages over older stereotactic biopsy equipment. The machine produces high-quality, instantaneous, digital images that show calcifications that could not be seen before. The procedure takes only 30 minutes and results are generally available to referring doctors within 2 days, says Dr. Patricia Hassell, a radiologist at the BCCA. She is trying to treat patients within a week of referral, but current demand is doubling that time. The procedure is less invasive and painful than open surgery because the smaller 11-gauge needle needs to be inserted only once instead of several times, and a vacuum system sucks the tissue sample into it. "This allows us much more flexibility in the amount of the lesions that we are able to biopsy," says Hassell. It also works well in the fatty breast tissue.

About 75% of breast masses can be detected by ultrasonographic screening, says Hassell, so that potentially up to 25% of patients with ductal carcinoma in situ cancers could benefit from the MIBB system. For patients needing definitive surgery for breast cancer, "this machine gets things in motion faster and it gives the surgeon a better idea of what he's dealing with and how much tissue he has to take out," says Hassell. The surgeons and pathologists at the BCCA "are very interested and like it very much," she says. About 1750 BC women are expected to have a breast biopsy this year. — *Heather Kent*, Vancouver