and two years later, he makes his first reference to the use of cold as '. . . a local means for producing insensibility during surgical operations.' . . . In September of the same year Arnott opened what was to prove a lifelong campaign against the dangers of inhalation anaesthesia. . . .

"In February, 1854 . . . he wrote a tract which was published by John Churchill, with the title, 'The Question Considered' and the rather ponderous sub-title: 'Is it justifiable to administer Chloroform in Surgical Operations after its having already proved suddenly fatal in upwards of fifty cases when pain can be safely prevented, without loss of consciousness, by momentary Benumbing Cold?' The following month he defended his title to be the instigator of the use of 'frigorific mixtures' against the claim of some of his Parisian colleagues in a paper. . . . In 1857 he produced a long article 'On Congelation as an Anaesthetic.' . . . 1867 saw Arnott's last effort for his method. In the Medical Times and Gazette of March 30th he wrote "On the Invention of Local Anaesthesia by Refrigeration.' . . . Arnott's work has been almost entirely forgotten except as a reference in a recent book. The revival of interest in refrigeration has provided an excuse to bring it to light again."

J. C. M. C.

KIRCHHOF, A. C., AND BOALS, D. C.: *Anesthesia for Total Laryngectomy.* West. J. Surg. Obst. & Gynec. **56**: 590–591 (Nov.) 1948.

"Total laryngectomy has become the treatment of choice in an increasingly large number of patients with cancer of the larynx. . . . The procedure we have found most effective is to introduce an oral endotracheal tube with inflatable cuff under direct vision for the early part of the operation. After the surgeons have dissected the larynx and upper trachea free, the endotracheal tube is pulled back as far as the vocal cords and the trachea sectioned transversely. A short piece of sterile endotracheal tubing with a bevelled tip, and equipped with an inflatable cuff is inserted by the surgeon into the open end of the trachea and the cuff inflated. The short tube (three to four inches in length) is fitted with a standard 90 degree elbow which has a suction hole covered by a sleeve of rubber tubing. This in turn is connected to a long rubber tube. This assembly (short tube and cuff, elbow and long tube) is sterilized in alcohol or other reliable antiseptic solution before surgery, and put in the surgical pack. . . . After insertion of the tube and inflation of the cuff by the surgeon, the longer tube is passed through the drapes to the anesthetist who reestablishes the closed system with the anesthesia machine."

J. C. M. C.

GORDH, T.: *Xylocain—A New Local Analgesic.* Anaesthesia **4**: 4–9 (Jan.) 1949.

"In 1943 Lofgren and Lundqvist, at the Organic Chemistry Institute of Stockholm University, produced a series of new compounds which in chemical composition were basic anilides different in structure from the local analgesics of the cocaine procaine group. One of these compounds w-diethylamino- 2.6-dimethylacetanilide, which was called xylocain, showed promise. . . . At the surgical clinic of Karolinska Hospital the new preparation has been on trial since 1944. . . . Clinical investigation began with wheal tests. . . . No local reaction was observed in this series. If adrenaline was added in concentration of 1 : 100,000, a considerably longer duration of analgesia was obtained. Whereas a 1 percent procaine solution with adrenaline has a duration of about 60–90

minutes, the analgesia produced by 1 percent xylocain with adrenaline lasted 4–5 hours. . . .

"After this preliminary trial, we proceeded to test the substance in infiltration analgesia. In the emergency department 400 recorded operations with ½, 1 and 2 percent solutions without the addition of adrenaline have been performed. . . . In the surgical department the preparation in combination with adrenaline was used in 405 cases. . . . Xylocain was found to be an excellent conduction analgesic, with rapid onset and long duration as compared with procaine. . . . Xylocain, unlike procaine, is a surface analgesic and is much less toxic than pontocaine and is completely free from irritation. . . . We have records of about a hundred cases where prolonged alleviation of pain such as could not possibly have been obtained with previously employed local analgesics has been attained. In many cases the relief from pain had continued for 6 or 7 hours. . . . For xylocain, the safety coefficient is 2–4 times higher than for procaine. . . . The dose recommended is the same as for procaine, with 0.5 g.-1.0 g. as maximum. . . . Xylocain is the most stable of the local analgesics hitherto used. It is not decomposed either in strongly acid or strongly alkaline solution, even if boiled. Xylocain solutions are therefore indefinitely stable."

J. C. M. C.

TUOHY, E. B.: *Integration of Anesthesiology in Medicine.* Connecticut M. J. 12: 989–991 (Nov.) 1948.

"At the moment qualified anesthesiologists are in great demand and there are not enough of them to supply the demand, let alone the minimum needs or requirements of hospitals in this country. At the moment several problems present themselves. Certain localities need and are requesting professional anesthesiologists and we cannot supply the necessary number of qualified individuals. Secondly, we have the task of demonstrating and convincing some medical groups the benefits to be gained by having the professional service and assistance of qualified anesthesiologists. . . . Medical school curricula should incorporate lectures on anesthesiology to indicate the close cooperation between surgery, medicine and anesthesia. . . . Anesthesiology which today is assuredly becoming a definite medical entity capable of providing greater possibilities in surgery, and above all promoting safer surgery for the patient, should not be included in any prepaid hospitalization service."

J. C. M. C.

MARRETT, H. R.: *A New General Anesthetic Apparatus.* Anaesthesia 4: 39–44 (Jan.) 1949.

"The apparatus has been designed with the primary object of combining the most popular features of existing types of general anaesthetic apparatus into one compact and portable unit. . . . The head embodies a soda lime carbon dioxide absorber, an ether vaporizer, a trichlorethylene or chloroform vaporizer, a rebreathing reservoir, the unidirectional valves, etc., and flowmeters normally for oxygen, carbon dioxide, cyclopropane and nitrous oxide. For the specialist, it is an all purpose apparatus providing the necessary facilities of the larger machines. It is equally convenient for private practice, hospital and service use. Its simplicity and safety also renders it admirably suitable for the instruction of students."

J. C. M. C.