

CHLOROFORM RATHER THAN ETHER ANESTHESIA IN TUBERCULOSIS *

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Ether has been the anesthetic for so many years along the northeastern coast of the United States that it is almost heresy to even discuss it; yet experience seems to show that it is either very irritating to the lungs or stimulating to a tuberculous process in the lungs and hence should not be used when there is question of pulmonary tuberculosis. Surgeons generally admit that ether is irritating to the lungs and yet they not only continue to administer it in cases of pulmonary tuberculosis, but also very rarely discuss the matter.

Wood's "Text-Book on Therapeutics" (thirteenth ed., 1906) recommends with Hewitt that in extreme emphysema, in chronic bronchitis attended by expectoration and dyspnea and in advanced pulmonary phthisis, chloroform or some other mixture containing chloroform should be employed. He adds that acute pulmonary disease especially contraindicates ether.

During the past six years I have never allowed my own patients with pulmonary tuberculosis to be operated on under ether when it was possible for me to prevent it. Moreover, all except one have been operated on under chloroform, and I have never seen any bad results that could possibly be attributed to this anesthetic.

During the same period I have seen a number of patients manifesting active tuberculosis of the lungs following operation, which activity appeared from a study of the history to be due either to the operation itself or to the ether anesthesia. The common operations in these cases were for enlarged glands of the neck, fistulas, appendicitis, enlarged tonsils and adenoids.

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The following represent several cases taken from my records without selection which I had opportunity to examine and watch for some time before and after an operation with anesthesia:

ETHER ANESTHESIA

CASE 1.—*History*.—A woman, aged 27, had four attacks of appendicitis before I saw her Sept. 12, 1906. Her brother had at the time advanced tuberculosis of the lungs. She showed a very small lesion slightly active at the right apex and some wasting, weighing only 109 pounds when her normal weight was 129. In the next three months she improved to practically perfect well-being and on Dec. 11, 1906, was operated on for appendicitis under ether anesthesia. I have never been able since to get her in as good condition as she was before the operation, and in the meantime the lesion at the right apex has increased so that it is now definitely down to the second rib.

CASE 2.—*History*.—A case of Dr. Stanton's which I also saw several times and which is quite typical is as follows: A woman, aged 25, was perfectly well till she developed ischio-rectal abscess. The ischio-rectal abscess was operated on one year ago under local anesthesia and later a radical operation was done under ether. Within three days the temperature had risen to 103 F., she began to spit blood, and since, tuberculosis of the lungs, which was then first noticed, has greatly advanced. She is now in a practically hopeless condition.

CHLOROFORM ANESTHESIA

CASE 1.—*History*.—A woman, aged 21, was first seen Nov. 4, 1902. She had an infiltration of the upper half of the upper lobe on each side and coarse moist râles all over both lungs. She expectorated profusely and her sputum contained an innumerable number of tubercle bacilli for a year and a half after I first saw her. While those signs remained practically the same, but after she had definitely increased in weight and was in pretty good constitutional condition she developed, Sept. 7, 1903, an abscess of the breast (probably tuberculous), which was opened and radically cleaned out under chloroform anesthesia without the slightest bad symptom following. The patient came to my office ten days later and continued her treatment, and for the past two years she has been entirely well, without active physical signs in the chest, and without any cough or expectoration. On account of the intense irritation already manifested in both lungs I should have expected this patient to do very badly under ether.

CASE 2.—*History*.—A woman, aged 29, was first seen on Jan. 24, 1905. On May 23, 1905, she developed tuberculosis, apparently having contracted it from her husband, who was in an advanced stage. Her lesion was at the right apex and was

definitely apparent and active. She became entirely well, and in January, 1908, developed appendicitis. She was operated on under chloroform, was out of the hospital in fourteen days, and since then has manifested no pulmonary irritation. In this case the lung condition was apparently cured or at least quiescent when she underwent the operation.

CASE 3.—*History*.—A woman, aged 25, was first seen Feb. 16, 1903. She had infiltration of the top of both lungs extending to the second rib with some dissemination. She went to the White Haven Sanatorium, became entirely well and was a nurse there for two years, when she developed pneumonia. It took a year to get over the pneumonia and its toxic effects. Three months later she developed acute appendicitis, for which she was operated on under chloroform anesthesia. She was out of the hospital in two weeks and has never had any symptoms since.

CASE 4.—*History*.—A woman, aged 24, was first seen Aug. 18, 1904. She had markedly enlarged right cervical glands, cavity at the top of the right lung and infiltration of the upper half of the left upper lobe. Was operated on for the enlarged cervical glands shortly after I first saw her under chloroform anesthesia. She became sufficiently well to enter the Phipps Hospital Training School, where she remained for a year, when she broke down from overwork and eventually died. The chloroform anesthesia, however, appeared to have rather a good than a bad effect.

NITROUS OXID GAS ANESTHESIA

CASE 1.—*History*.—A man, aged 18, was first seen in March, 1908, at the White Haven Sanatorium. History showed that pulmonary symptoms first developed in April 1907. The physical signs were those of tuberculous infiltration of the upper half of the right upper lobe. About three weeks after admission to the sanatorium he developed a large ischio-rectal abscess which was opened. A radical operation was performed under nitrous oxid gas on Aug. 1, 1908. The abscess was very large, making the operation correspondingly serious. He continued to improve exactly as before the operation, never showed the slightest activity after the operation and left the White Haven Sanatorium with the "disease arrested" at the end of September, 1908, and since then has remained in perfect condition.

The mere statement of the cases makes it appear that chloroform might even be somewhat curative, and this has been asserted by some, especially Holmes and Woodcock of London. I am not ready, however, to advocate chloroform in the cure, but do believe that in case of necessary operation with anesthesia, chloroform should be the anesthetic and not ether. Moreover, chloroform

should be administered, not only in all cases of tuberculosis of the lungs, but in all cases in which tuberculosis of the lungs may be suspected, like, for instance, cases that manifest tuberculosis elsewhere, as in the cervical glands, in the ischio-rectal region, etc.

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