

SOCIETY OF ANAESTHETISTS.

WALTER TYRRELL, L.R.C.P., M.R.C.S., President, in the Chair.
Thursday, March 5th, 1903.

A REGULATING CHLOROFORM INHALER.

MR. VERNON HARCOURT, F.R.S., read a paper describing a new regulating chloroform inhaler. During some observations upon the measurement of light he had employed pentane and happening to inhale some became aware of its anaesthetic properties. With Professor Gotch he investigated the physiological properties of this member of the paraffin series. The control experiments were conducted with chloroform, and as a result Mr. Harcourt became somewhat unwillingly convinced that the last-named body was the better anaesthetic of the two. He was then led to investigate how the amount of chloroform vapour in any given amount of air could be measured. The first attempt at constructing an inhaler which would deliver a known percentage of chloroform consisted in a tank so arranged that air was drawn through a mixture of 80 parts by weight of alcohol and 20 of chloroform through water which kept back the alcohol and delivered into a tubulure 2 per cent. chloroform vapour and 98 of air. A stopcock was constructed which rendered it possible to cut down this 2 per cent. vapour to any desired lower percentage. This apparatus was tested at the Radcliffe Infirmary, and, proving satisfactory it was replaced by a more portable one in which the principle of diluting the chloroform by admixture with alcohol was replaced by an equally exact one—namely, permitting air to pass over a surface of known area of chloroform. This apparatus in its more portable form became somewhat modified from the first model. In effect it consisted of a Woolf's bottle attached by caoutchouc tubing to one arm of a metal stand. This was essentially three tubulures so arranged that chloroform vapour entered at one tubulure after traversing the surface of the chloroform in the bottle and then passed along a tubulure leading to the facepiece. The other tubulure admitted air. A stopcock, as in the original apparatus, by admitting more or less air diluted the chloroform vapour. The action of the stopcock was registered by an indicating needle traversing a dial. Thus, when the indicator was at "0" the tubulure from the Woolf's bottle was closed as the index travelled towards "2" the percentage of chloroform was increased until the maximum 2 per cent. was given, the free airway being closed. In the facepiece and at the inlet of each tube were placed accurately made valves to ensure ingress of air and chloroform vapour during inspiration and egress of respired air during expiration. The use of bulbs constructed so that one floated and the other sank when the required temperature of the chloroform in the bottle was reached ensured the desired rate of evaporation.

The PRESIDENT complimented Mr. Harcourt upon the success of his achievement. While earlier workers such as Snow, Clover, Junker, and members of the Society of Anaesthetists had designed apparatus with a view to giving safe proportions of chloroform and air, no exact method of estimating the percentage strength of the chloroform vapour had been provided before Mr. Harcourt's invention. He narrated some cases in which he had successfully used the apparatus, and only in one had he—using a 1.4 per cent. vapour—met with undesirable symptoms.

Dr. DUDLEY BUXTON had used the apparatus and considered it fulfilled its claims satisfactorily. Whether a 2 per cent. vapour was sufficiently strong for all the requirements of modern surgery he was at present uncertain. On many occasions the anaesthetist now had to push anaesthesia to a much more profound degree than was asked for or deemed desirable fifty years ago. In some abdominal cases he had found 2 per cent. with Mr. Harcourt's apparatus did not afford the degree of anaesthesia the surgeon required. It would be an advantage if the apparatus could on occasion provide a 3 per cent. or possibly 4 per cent. vapour.

Mr. HARVEY HILLIARD extolled the quietness of the induction afforded by Mr. Harcourt's apparatus. He had not succeeded in obtaining a sufficiently deep anaesthesia in all his cases, and vomiting and rigidity had caused inconvenience.

Mr. BELFRAGE, Mr. EASTES, Dr. McCARDIE (Birmingham), and Mr. COPESTAKE (Derby) having spoken, Mr. VERNON HARCOURT replied.

Mr. COPESTAKE (Derby) described an apparatus for administering chloroform, ether, or the A.C.E. mixture.

ERRATUM.—In the report of the Obstetrical Society of London which was published in the BRITISH MEDICAL JOURNAL of March 21st, p. 670, column 1, line 15, for "case" read "instance."

GLASGOW NORTHERN MEDICAL SOCIETY.—At a meeting held on March 3rd a paper was read by Dr. J. K. KELLY entitled Can anything Special be done by the Medical Practitioner to Diminish the Frequency and Lessen the Mortality of Cancer of the Uterus? Dr. Kelly began by referring to the small amount of benefit which it was possible to afford to the patients sent in to hospital. In his experience nine cases out of ten could get only temporary relief if even that. There was something wrong if this was so, and the cause seemed to lie with the general practitioner in not diagnosing the cases early enough so as to be operable. The ignorance of the female public, too, was perhaps an important feature, as they often did not regard as serious a uterine discharge even after the menopause, compared with a condition of amenorrhoea. Dr. Kelly suggested that the cause of the frequency of cancer was due to long-continued irritation, especially from child-bearing and the laceration of the cervix occurring at such times. It was to be deprecated that any physician should glory in spending as little time over his confinements as possible, as it often ruptured the cervix and led to cancer. Dr. Kelly thought that the cervix should be examined after a confinement, and should there be any laceration it ought to be sutured at the time. Catarrh of the cervix and its modern treatment was also having much to do with the cause of malignant disease. In this situation, contrary to the treatment of inflammation in every other part of the body, the common usage was irritant applications. This added fuel to the fire. Gonorrhoea was mentioned as an important element not to be lost sight of. The only hope of diminishing the mortality lay in recognizing the disease in its early stages. The symptoms were reviewed individually, the chief being pain, haemorrhage, and fetid discharge. The physical appearance in the very earliest stage was referred to. When cachexia showed itself, the time for operation was much too late. The lecturer spoke of the importance of having a microscopic examination made from the ulcer. Reference was made to Dr. Lewers's suggestion that a leaflet might be published relating to the cause of cancer in the female, and put in the hands of doctors for distribution to nurses or those interested, so that those who suffered from the early symptoms might seek advice before it was too late. In this way the public would become educated about the matter. While approving of this, Dr. Kelly said that the thing of prime importance was to awaken the medical profession to a full sense of the importance of the matter; then this knowledge would be sure to find its way down to our patients. After considerable discussion, Dr. Kelly, in reply, said that the fear the practitioner had of examining the cervix was the fear that some septic material might be introduced. In many cases there was nothing which suggested a laceration of the cervix. There would then be no call for an examination; but when there was much haemorrhage or a severe labour, the cervix should be examined. It was quite easy to do this. It could be pulled down to the vulva after a labour without trouble with a volsella forceps and pressure externally, and could then be examined with the eye. If any laceration was seen it would be more easily stitched than the perineum, because the tissue was soft. In regard to light, the examination would often be unsatisfactory in working men's houses. With a candle and speculum, however, one might see fairly well. The practitioner should however rely more upon touch than sight in diagnosis of disease of the cervix. Laceration of the cervix had been suggested as a probable cause of cancer. The resulting ectropion exposed the lining membrane of the cervix to bacteria and acid secretion, the vagina being the receptacle of bacteria of all sorts. There were many cases of cancer of the cervix under 30 years of age, but it was commonest after 40. Cancer of the body of the uterus was mostly a disease of old age. Any haemorrhage from the interior of the uterus in an old person should at once be considered to be cancer. There was no other disease which would cause the haemorrhage. Curettage would be of no use then. The whole body must be removed at once. Dr. Kelly did not want it to be thought that specialists were blaming the general practitioner for not diagnosing the cases early enough. Specialists often made mistakes in diagnosis and should own to it. Douching the vagina might often be sufficient to heal a laceration in place of suturing, but the effect of the cicatrix would always remain. Filth in the vagina had very likely a great deal to do with the cause of cancer at the cervix. The vaginal douche should be in more common use. Women should lie on the back with a bedpan below, not sit over a pan as was usually done. This latter method would fail to flush the rugose walls of the vagina.