The Administration of Chloroform.

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At the present time, when so many nurses act as assistants, not only to surgeons at operations, but also, and to a far larger extent, to practitioners in midwifery cases, some knowledge of the best methods of administering chloroform is almost essential. We have much pleasure, therefore, in drawing their attention to the following valuable and practical article, which recently appeared in the *Medical Times*.

It is for many reasons advisable to use a chloroform mask in all cases in preference to a piece of lint or towel end, because the latter may come into contact with the patient's face and blister it, when wet with the fluid anæsthetic.

Skinner's wire frame, covered with one thickness of ordinary flannel is the best mask, and Thomas's two ounce chloroform drop-bottle should be procured for pouring the liquid upon it.

Besides these simple instruments, a tongueforceps with catch, a Mason's mouth gag, a short wooden wedge for insertion between clenched teeth, and tracheotomy instruments are vital accessories at every administration. No food should be allowed the patient for four hours beforehand, and the last meal should consist of semi-fluids only.

The patient should always be placed in the horizontal position, preferably on his back, with the head low and turned to one side.

Three portions of the patient's system should be examined before giving the anæsthetic—the upper air passages, the lungs, and the circulation.

First open the mouth and look inside it for loose teeth, in order that these may not be dislodged by the insertion of a gag or other subsequent manipulations. Any artificial teeth on *small* plates should be removed, but a complete upper or lower set is best left in place, because some respiratory obstruction is apt to arise during narcosis from the close approximation of the tongue and palatal structures. Observe also whether nasal breathing is free, and listen to the respiration to detect tonsillar, laryngeal or tracheal obstructions.

Place your hands upon the patient's chest and tell him to breathe freely; any impairment in mobility of the chest walls should put you on your guard for pathological conditions within the thorax, and you should, if these be suspected, listen carefully to the respiratory sounds, both

in front and behind, with the stethoscope. If it be found that less than the equivalent of one lung is working properly, do not give a general anæsthetic at all.

Feel both radial pulses to determine their force and regularity. You will thus be better able to estimate changes in the circulation during the anæsthesia. It is also wise, if there should be any suspicion of cardiac valvular incompetence, to acquaint yourself with its nature and extent, as it will be well, if there should be disease, to use an open method of producing anæsthesia and to take especial care that no asphyxial element, however slight, shall be admitted during the narcosis.

In conducting the administration, turn the patient's head to the right side, if this position be suitable for the operation, and rest your left arm lightly upon the left side of his head with the palmar margin of your left hand and little finger supporting his lower jaw, the Skinner's mask (dry) being held between the other fingers and thumb of that hand half an inch from the patient's face, so as to cover his nose and mouth. Now tell the patient to breathe slowly "in and out through the mouth," or tell a child to close his eyes and "blow the scent away," and from the drop-bottle held in your right hand drop first a few drops of chloroform upon the outer and upper surface of the flannel mask opposite the patient's mouth, not near his eyes, then, very carefully watching its effect upon his respiration, continue dropping on chloroform until a patch of flannel about the size of a penny is wet with Stop adding chloroform for a few seconds it. whenever there is any holding of the breath until respiration is again regular.

Keep on telling the patient to "blow in and out," increasing the size of the wet patch to that of two pennies.

The patient's consciousness is now disordered, he is probably swallowing at intervals, and may attempt to move about; your best plan, therefore, is to bear slightly with your left arm and wrist upon the left side of his head, and thereby effectually prevent any alteration in his posture. If an adult patient holds his breath, or if a child cries at this stage, hold the mask away from his face for the very deep inspiration which immediately follows, then replace the mask and proceed as before, keeping a patch of the flannel always wet with chloroform. Regular automatic respiration with muscular flaccidity will soon supervene.

No patient should be sick in passing under the influence of choloform, for if the vapour be gradually and steadily increased as indicated, the vomiting centre will be narcotised without giving time for nausea or retching to occur.



