

Dr. Howard Kelly writes: "The best disinfectant in puerperal cases is pure warm water. The trouble of all drugs applied intra-uterine is that they only reach the less superficial area, and if there are any foci of infection, the germs which lie deep in the tissues are neither destroyed nor removed. For this reason I consider the mechanical means, with pure and free drainage, the best. The bichloride of mercury I consider dangerous and inefficient, and ought never to be used under any circumstances intra-uterine."

Dr. Norris, of Pennsylvania, says the bichloride of mercury is effective but dangerous. Creolin is as powerful and safer, and is therefore to be recommended.

My own experience of the use of corrosive sublimate post-partum, in similar and even weaker solutions, is most unfavorable, although followed by large douches of warm water, which but few authors recommend to be used. In a solution strong enough to be of service, most authors agree it is dangerous to use intra-uterine, and it ranks no higher in the comparative table than does creolin and probably strong solution of permanganate of potash. Therefore it ought to be discarded, except for external use.

Ice and iced water are recommended by many authors to be used in cases of p.p. hæmorrhage, the ice introduced to be not larger than a walnut. There are several objections, I think, to its use: it increases the shock already existing, although it undoubtedly checks the hæmorrhage for the time being, and as soon as it melts or is removed, the hæmorrhage often returns as severely as before, the uterine vessels which it contracted now dilating. Great care would also have to be used that no sharp, irregular pieces were introduced, as the contraction produced by the ice might possibly drive the sharp points through the uterus. In winter in this country some practitioners make a hard snowball and introduce it, thus avoiding the danger of perforation.

Hot water is probably the most commonly used and best means for checking p.p. hæmorrhage at a temperature of from  $110^{\circ}$  to  $128.75^{\circ}$  F., this latter temperature being, in my opinion, much too warm, being decidedly uncomfortable to the hand. The water should have been boiled and been allowed to cool. It has the advantage of being always obtainable, of, as a rule, stopping the hæmorrhage, and of allowing afterwards some other means to be used if desired. The quantity to be used should be at least from one quart to half a gallon, and if given by a douche bag held sufficiently high, at least six or seven feet, will not only check hæmorrhage, but also remove the debris from the uterus. One point about giving the hot douche is that a metallic nozzle should never be used, preferably a perfectly aseptic German glass tube.

The question may be asked: what would you consider a dangerous hæmorrhage? This is only a relative term, for what to one would be but a slight hæmorrhage might to another, or to the same under certain conditions, be a dangerous hæmorrhage. Generally speaking, a slight hæmorrhage would be from 500 to 1,000 gms. of blood lost, a profuse hæmorrhage from 1,000 to 1,500 gms., and a dangerous from 1,500 to 2,000 gms.

#### STIMULANTS.

Amongst the stimulants used in p.p. hæmorrhage, probably none will be found to act more promptly or satisfactorily than the nitrate of strychnia, in doses of from one-fortieth to one-twentieth of a grain hypodermically, within a very short period the pulse rate becoming much slower and fuller.

Opium in cases of hæmorrhage is highly recommended by many of the authors, and seems to have a direct action as a stimulant upon the heart. It is best given in the form of a hypodermic of Battley.

Brandy or ether are used hypodermically, either after severe hæmorrhage with heart failure, or heart failure from any cause in the third stage or immediately after it. It is given hypodermically in half drachm doses, repeated as often as needed. Most authorities recommend its use.

A solution of chloride of sodium, although seldom used directly in the third stage, may be needed, and is a most excellent remedy immediately after severe cases of hæmorrhage, whether post-partum or in cases of p'acenta prævia. Its use is found in supplying fluid to the arterial system depleted by the hæmorrhage, and perhaps preventing too great absorption of noxious fluids. It may be best administered in the strength of a dessert-spoonful and a half to a quart of tepid water, and allowed to trickle into the rectum from the douche bag placed at about the level of the anus, the attendant every half hour lifting the bag and allowing a small quantity to enter. As much as a gallon and a half may thus be given and absorbed in thirty-six hours, the effect on the pulse being most gratifying, being not so compressible and much more full. The advantage of the solution of sodium is that it is readily absorbed by the rectum.

In conclusion, I beg to thank you, gentlemen, for the patience with which you have listened to me. The brief which I have held for the use of drugs in the third stage I have endeavored to defend, and I hope to convince any sceptics, if it be possible there are such, that drugs are not only useful, but on occasions absolutely required, and anyone not using them places himself against the weight of authority in the medical world.

Dr. A. A. BROWNE took up the manipula-