

uses, firmly attached to the muscular wall of the uterus, are closed during muscular contraction, but gape open during relaxation: therefore in relaxed conditions of the uterus, fluid or air may readily penetrate into the veins. I have seen sudden death produced in this way during an intra-uterine injection of perchloride of iron for postpartum hæmorrhage.

The fluids most commonly used for injection are plain water, or solutions of permanganate of potash, carbolic acid, or corrosive sublimate. Plain hot water is the safest, and is quite sufficient when debris is to be washed away, and a simple mechanical effect is the only one desired. But in septic cases, where germicide action is also required, corrosive sublimate is by far the most effective but at the same time it is the most dangerous. Death has occurred in sixty hours from the effects of an intra-uterine sublimate douche (1 2000). Patients suffering from anæmia or kidney troubles are very susceptible to the action of mercury: so, too, are those who have recently been under mercurial treatment, or in whom there is marked atony of the uterus, or extensive traumatism, of the genital tract. It may be taken as a general rule that sublimate injections are contra-indicated in all such cases, or should at least be given with the greatest caution.

Frequently an intra-uterine douche is followed by a chill and rapid rise of temperature (104° or over), accompanied sometimes with colic and abdominal tenderness. As a rule these symptoms are of nervous origin, though exceptionally they may be due to absorption. In men, the passage of a catheter or sound is occasionally followed by a sharp rigor and high fever. Surgeons call this urethral fever, and attribute it to nervous influences. Similar symptoms may be caused by the passage of a uterine sound, or by artificial dilatation of the cervix, without any evidence of inflammatory mischief; nervous influences are undoubtedly the cause. So, in like manner, the passage of a foreign body (irrigation nozzle) into the uterus, and the distention of the uterine cavity with fluid, especially if the outflow be insufficient, may produce similar nervous symptoms, sometimes of an alarming nature.

What precautions are to be taken for the avoidance of these dangers and accidents?

1st. The patient should always be placed across the bed in a *dorsal* position, with hips well raised,

and thighs everted. The operator has then better control over the direction and force of the injection, as well as over the outflow. In intra-uterine douching the anterior lip can be more easily seized and the uterine cavity straightened, if the patient is lying in the dorsal position.

2nd. The vaginal or uterine nozzle should be *inflexible* (glass or hard rubber), without a central orifice in the bulb (to avoid injecting fluid through the fallopian tubes, or dislodging thrombi from the placental site). The openings in the bulb should be directed slightly backwards, so that the injection stream may flow away from the fundus, not towards it.

3rd. A sufficient outflow should be secured. The vaginal orifice should be kept open. Before an intra-uterine douche is given, the anterior lip should be seized with a vulsellum, or tenaculum, and drawn gently downwards till the uterine cavity is straightened. The nozzle can then be more easily introduced, and a good outflow is secured. After the operation it should always be ascertained that there is no pouching of the vagina, or retention of fluid.

4th. The quantity of fluid injected should be small; from one to two litres is quite sufficient. Large and long continued injections are not more effectual, while they greatly increase the risks.

5th. Antiseptic injections should be weak, unless powerful germicide action is required in acute septic cases. For an ordinary vaginal douche a sublimate solution of 1-7000 or 1-5000 is quite strong enough. The strong solutions (1-2000, or 1-1000, or even 1-500) should be used only in urgent septic cases, and then with the greatest caution. After a sublimate injection, a pint or two of plain hot water should be run through to wash away any retained sublimate, thus lessening the risks of absorption.

6th. The injection should always be used hot (108°-112° F.). Hot water is a powerful stimulant, causing the uterus to contract firmly, thus closing up the sinuses and tubes, and expelling the injection fluid from its cavity.

7th. To prevent nervous chill and rise of temperature, a glass of brandy, or some diffusible stimulant should be given fifteen minutes before operating. The stimulant acts primarily by bracing up the vascular system, and secondarily by increasing the resisting power of the nervous system. If this precaution be taken, and the injection be given