

than others. Thus, in surgical operations on the external organs of generation, particularly in females, we find that reflex action may be excited in the parts, though the remainder of the periphery of the trunk be anæsthetized. Anæsthesia, in these cases, needs be as profound as if we were going to amputate below the elbow or knee joint.

Confirmed alcoholics are more or less refractory to anæsthetics, and in reducing old luxations on those subjects we are often unable to obtain complete muscular relaxation by confining ourselves within the ordinary limits of surgical anæsthesia. One reason for this is, that the cortices of the motor centres having been previously hardened by alcohol, are not as rapidly affected by chloroform.

The antispasmodic properties of chloroform are of signal service in poisoning by strychnia or brucia. The tetanic convulsions, opisthotonos and fixation of the diaphragm, in these cases, indicate an exalted reflex irritability of the spinal cord. Anæsthesia destroys this hyperæsthesia and relaxes the clonic spasm of the respiratory muscles—a spasm which produces death by apnoea. Chloral hydrate, potassium bromide, Calabar bean and nicotia are usually recommended as physiological antidotes to strychnia, but chloroform by inhalation is our main reliance. We of course advise that tannin be administered, the stomach evacuated whenever it is possible, but the respiratory spasm must be relieved and kept in subjection.

Inhalations of chloroform have become classical in the treatment of puerperal eclampsia, but to elucidate, if possible, the rationalé of this medication we needs must make a cursory etiological survey. Here, then, whether anasarca or albuminuria be present or otherwise, we are supposed to find an excess of urea in the blood, and many believe that the convulsions of puerperal eclampsia are due to the action of the carbamide on the nerve centres. Late French experimenters, however, assert that there is no such thing as "uræmia," that what has generally been accepted as uræmia, should be called "potassæmia," that the potassium salts are present in excess in the blood current of uræmic patients, and that toxic injections of potassium salts will produce what, up to the present, has been known as uræmic poisoning. We cannot accept either explanation, because we cannot hide from ourselves the broad fact that under the influence of intra-venous injections of

any alkali, carbonic acid gas is so rapidly evolved into the blood current, that the pneumatic acid of the lung tissue cannot liberate the whole volume of the carbamide, and as a consequence, the comatose condition which we meet with in uræmic poisoning is induced. Then, too, coma and eclampsia are not synonyms. In candidates for puerperal eclampsia, we find a partial or complete suppression of urine with a uriniferous, ammoniacal odor evolved from the body and excretions; convulsions follow if the suppression is not relieved. Now we cannot produce convulsions by subcutaneous injections of either normal urine, or ammonium carbonate, but by a mixture of both, or by a subcutaneous injection of ammoniacal urine we can readily simulate an attack of eclampsia. Thus, then, it would appear that by the retention and re-absorption of the products of dis-assimilation, the urea of the blood current is decomposed into ammonium carbonate and carbonic acid, and a urino-ammonæmia generated. During pregnancy, too, the nervous system is continually storing up a reserve force to carry the patient through the parturient act, and the urino-ammoniacal products, by directing this latent energy in improper channels, give rise to that state of exalted reflex irritability which we call "puerperal eclampsia." Chloroform fits in here like a statue in its niche. The anæsthetic, by irritating the diabetic centre in the medulla oblongata, produces glycosuria. This glycosuria, in turn, prevents the further decomposition of urea and aids the system to overcome the morbid effects of misdirected animal chemistry. Thus, then, the good effects of muscular relaxation are not the only gains from administering chloroform in puerperal eclampsia.

Since the British queen, while giving birth to her eighth child in 1853, forced her accoucheurs to give her chloroform, the practice has become fashionable, especially in England. It has been urged that we thus silence the pains of labor, and that those pains are necessary to the expulsion of the child, consequently we should not administer the anæsthetic. One moment's reflection will show us that the terms "pain" and "uterine contraction" are not synonymous. In fact the pains of the first stage of labor are usually referred to the lumbar portion of the spine, and ice-bags placed in this region will relieve the pain without retard-