

absent for some time after the second and third seizures. Eight ounces of urine drawn by catheter immediately after the third fit contained a small quantity of albumen (about one-tenth per cent. approximately), and the following are the reports subsequently :

*Clinical urinary examination.* Specimen No. 1. Passed eight hours after labor ; color, light clear yellow ; reaction, markedly acid ; specific gravity, 1010 ; color and quantity of sediment, grayish red, moderate ; albumen, about one-tenth per cent. ; urea, five and a quarter grains to ounce ; amorph. urates present ; mucus and pus, some mucus and a few pus cells ; epithelium, squamous and débris ; blood, numerous cells ; casts, not found.

Specimen No. 2. Passed thirty-four hours after labor ; color, clear amber ; reaction, markedly acid ; specific gravity, 1020 ; color and quantity of sediment, pink, abundant ; albumen, absent ; urea, eight and a half grains to ounce ; amorph. urates, very abundant ; mucus and pus, some mucus and scattered pus cells ; epithelium, squamous and débris ; blood, absent ; casts, not found.

It would have been a satisfaction in both cases had the urine been examined just before labor.

I have asked myself the following questions :

1. Is the failure of the kidney to perform elimination the sole cause of eclamptic seizure ?
2. What rôle does the liver play in the production of eclampsia ?
3. May the condition of the blood be the cause ?
4. Is there another function of the kidney the impairment of which leads to eclampsia.
5. Is the increase of blood pressure the primary cause ?

(1) I have concluded that in one class of cases the impoverished condition of the blood is the cause, and in the other class increase of blood pressure is the primary etiological factor in the causation of eclampsia. The convulsions are commonly called uræmic, but it was proved as long ago as 1860, by Richter, that the injection of a saturated solution of urea in animals produced no convulsions at all. Brown-Séquad and D'Arsonval found that normal urine filtered and rendered sterile under high pressure by carbonic acid could be injected with impunity into the veins of animals. The largest injection which it was possible to give without noticeable effect was 110 grammes per kilogramme of the animal, an exceedingly large amount, when, according to Bouchard, ninety grammes of water per kilogramme begins to produce noticeable effect, and 122 grammes causes death. The slowness of injection (one or two hours) in these experiments permitted, by an abundant diuresis, the rapid evacuation of urinary principles considered as toxic.