

and trying to find out what may be the instruction afforded in the several instances of sugar in the urine.

On the subject of treatment I do not propose to dwell to-night. If my views of the analysis of the causes of glycosuria are at all to be admitted, it must follow that the treatment of a subordinate glycosuria must be involved in the treatment of the major part of the case.

Not many years ago, when albumen was found in a patient's urine he was supposed to have Bright's disease. So now it is very often the practice to speak of the existence of a small quantity of sugar in the urine as justifying the use of the term diabetes. I think that those who have studied the question most thoroughly will agree with me that this is a most unwise use of the term; unwise as bearing alike upon prognosis and treatment.

Finally, I trust you will see that all I have put forward is rather analytical and suggestive than final or didactic. I wish to submit for your criticism, and to propose for your investigation, certain associations of glycosuria which have presented themselves to me, and to which I have devoted a good deal of thought.—Wm. M. Ord, M.D., F.R.C.P., in *Br. Med. Jour.*

REPORT OF THE SECOND HYDERABAD CHLOROFORM COMMISSION.

The experiments of the Committee were designed to show the effect upon the blood pressure, heart, and respiration of the inhalation of chloroform, ether, and the A. C. E. mixture, administered in various ways and under varying conditions. The objects of the Commission were five in number:—

I. To test the suitability and safety of chloroform as an anæsthetic. The experiments with ether and the A. C. E. mixture were instituted principally for the sake of comparison with chloroform on certain points, and it is not pretended that they afford a complete exposition of the action of those agents on the system.

II. The effect of pushing the above-named anæsthetics (a) to a dangerous degree, and more especially until the respiration ceases; (b) until death results.

III. The modifications in the effects of these anæsthetics which result from (a) asphyxia in varying degrees and produced by various means, (b) from the use of drugs such as morphine, atropine, physostigmine, and others.

IV. The reality or otherwise of the alleged liability during ordinary chloroform administration to the occurrence of primary or secondary syncope or stoppage of the heart, brought about either by shock or through fatty or weak heart, or by hæm-

orrhage, or by changes in the position of the body. To investigate these points, in the first place a large number of operations which are reported to be especially dangerous in reference to shock were performed in every stage of anæsthesia, and numerous experiments were also made to show the effect of direct irritation of the vagus. Secondly, a number of animals were dosed with phosphorus before they were experimented on. This caused weakening of the heart by fatty degeneration of its fibres, but at the same time other complicated changes in the whole of the organs of the body not met with in the condition known as fatty heart in human beings. On the other hand, there are conditions often met with in the fatty heart, such as changes of the coronary vessels, which were not produced by the phosphorus.

V. The effect of the anæsthetics above mentioned upon different animals, more especially upon monkeys, as the nearest approach to human beings.

The conclusions to which the Commission has been brought by the study of these experiments are the following:—

(1) Chloroform, when given continuously by any means which ensures its free dilution with air, causes a *gradual* fall in the mean blood pressure, provided the animal's respiration is not impeded in any way, and it continues to breathe quietly without struggling or involuntary holding of the breath—as almost always happens when the chloroform is sufficiently diluted. As this fall continues the animal first becomes insensible, then the respiration gradually ceases, and lastly the heart stops beating. If the chloroform is less diluted the fall is more rapid, but is always gradual, so long as the other conditions are maintained; and however concentrated the chloroform may be, it never causes sudden death from stoppage of the heart. The greater the degree of dilution the less rapid is the fall, until a degree of dilution is reached which no longer appreciably lowers the blood pressure or produces anæsthesia.

(2) If the inhalation is interrupted at any stage, the fall of pressure still continues at a rate which depends altogether on the rapidity of the fall while the chloroform was being inhaled. This after-fall is probably due to absorption of a portion of the residue of chloroform in the air passages after the stoppage of the inhalation. In this way it often happens, if chloroform is given rather freely, that, though the respiration may be going on when the chloroform is discontinued, it afterwards stops.

(3) If the administration of the chloroform is stopped at an early stage, the pressure very soon begins to rise again, and gradually becomes normal; but if the chloroform is pushed further, there comes a time, not easy to define, when the blood pressure and respiration will no longer be restored spontaneously, although the heart continues to beat after the inhalation is stopped.