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PRACTICAL MEDICINE.

ON ACUTE URÆMIA.

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(Concluded from page 73.)

I have now come to the special object of this paper, viz: to the consideration of the treatment of acute uræmia.

I shall first give a brief synopsis of the most prominent views of the present day—the views of standard authorities. All agree in this, that in the treatment of acute uræmia, to secure as rapidly as possible a free eliminative action either by the skin or bowels, or by both, or by the kidneys, is of the first importance.

Frierich is the only authority that proposes to neutralize the uræmic poison, which he claims, is ammonia. To accomplish this he directs the inhalation of chlorine gas, or the internal administration of the vegetable acids.

With most authorities the favourite method is diaphoresis, accomplished by vapour or hot air. It is claimed that by a vicarious action of the skin, the excrementitious products which normally fall to the lot of the kidneys to excrete are removed from the system in the cutaneous perspiration.

In connection with the process of elimination, a vicarious action of the bowels is induced by the internal administration of drastic purgatives: elaterium and scammony are the favourites to accomplish this hydragogue catharsis; and it is also claimed that by this method the alimentary canal eliminates the products which should normally find their way out of the body by the urine.

The testimony of authors on the utility of diuretics in the treatment of acute uræmia is conflicting.

Dr. Roberts says that his experience has not given him a high opinion of their efficacy.

Dr. Harley says that it ought never to be forgotten, that in acute Bright's disease, as well as in the first stage of all inflammatory and congestive attacks occurring in the course of chronic kidney affections, diuretics are inadmissible; and he adds, that the reason why the employment of diuretics often does harm in acute kidney affections is readily understood when we recollect that they have always the tendency rather to increase than diminish the flow of blood to the already inflamed organs.

Dr. Geo. M. Johnston states that with our present knowledge of renal pathology, it is clear that the practice of giving diuretics in acute nephritis is most unjustifiable.

Dr. Richardson says that one of the greatest errors common to the inexperienced is to give diuretics to a badly-working kidney,—an error as unphilosophical as it is unpardonable, for the cessation of the secreting function of the kidney indicates a tendency to congestion of the renal organs. To relieve renal congestion, not the kid-

neys, but some other emunctory channels, must be freely opened, and the kidneys left to do as little labour as possible.

On the other hand, Niemeyer maintains that, whatever theoretical objection against the employment of diuretics there may be, in desperate cases recourse should always be had to them.

Dr. Stewart recommends diuretics in the acute stage of the inflammatory form of Bright's disease to remove the effete material from the uriniferous tubes.

The ground on which diuretics are objected to is, that it is contrary to the principles of medicine to stimulate an inflamed part,—that the first step towards the healing of an inflamed organ is rest.

Admitting that this view is sound, we have a class of diuretics that do not in any sense act as stimulants to the kidney. Digitalis ranks first in this list; although a very efficient diuretic, it never seems to irritate the kidneys. The *modus operandi* of this remedy is now well settled (Stewart). By increasing the power of the heart's action, and perhaps, also, contracting the capillaries, it materially increases the blood-pressure. As the normal secretion of urine depends upon that pressure being in the healthy state unopposed by any obstruction, and the diminished flow in this disease is due to obstruction within the tubules, the digitalis appears to supply such an increase of pressure as overcomes the obstruction, and, indeed, carries it away by the force of the current it originates.

Accepting this view of the diuretic action of digitalis, its administration is especially indicated in acute uræmia. To obtain its effects in the condition of the kidneys that attends acute uræmia, I am convinced that much larger doses are required than usually are administered. My rule of practice in these cases is to give $\frac{1}{2}$ an ounce of the infusion of the English leaves every three hours for twenty-four hours—or at least until I produce the specific effect of the drug—and I do not remember in a single instance to have met with the overwhelming accumulative effects of digitalis of which so many writers warn us.

The experience of every one, I think, will sustain me in the statement that when acute uræmia is fully developed, and the patient is in convulsions or coma, that often (in the majority of cases) the skin and the bowels, as well as the kidneys, lose their excretory action, diaphoresis cannot be induced, or if induced is not eliminative, and the bowels do not respond to purgatives, although the patient may swallow them in large doses.

Under these circumstances, Dr. Richardson says that he is "convinced that in cases of acute uræmia there is one, and only one, remedy to be adopted; that remedy is none other than the free abstraction of blood."

On physiological grounds venesection, in ex-

treme examples of uræmia, comes forward as a natural and effective remedy; for, as there is a soluble poison in the blood, we secure in blood-letting the readiest means by which to remove the poison directly. He adds, there is yet another advantage in blood-letting; by it we relieve congestion of the visceral organs, and specially of the kidneys,—hence it usually obtains that after a removal of blood, secretion takes place readily, and a response is offered diaphoretic and purgative remedies which did not before present itself.

Dr. Harley (in his recent work on the urine and its derangements) makes the statement that in some cases of acute uræmia, especially in uræmic eclampsia, venesection may sometimes be had recourse to with great advantage, but its indiscriminate use he regards as highly unphilosophical with our present knowledge of uræmic convulsions.

Dr. Baun, in his monograph on uræmic eclampsia, states that since the days of Dewees, Burns, and Hamilton, it has been and still is the custom to find the only power against uræmic eclampsia in abundant general blood-letting often repeated—a proceeding which he believes can be justified as little by the present state of our theoretical knowledge in regard to this disease, as it is by the mortality which follows its employment.

By bleeding the hydræmia is increased, as well as the danger of puerperal thrombosis and pyæmia, and not unfrequently the paroxysms are aggravated. A very strong argument against venesection in acute uræmia is the fact that, after extensive trial by the profession, the practice has fallen into disuse.

The question then comes to us, if overwhelming the system by the uræmic poison (marked by convulsions and coma) shuts off for a time all avenues of elimination, what means have we to counteract the effects of this poison and open again the avenues of its elimination, or, at least, to hold the patient until the normal eliminating process shall be re-established?

Our first efforts must be directed to diminish reflex sensibility, and subdue spasmodic muscular paroxysms, for these, if continued, either will directly terminate life or end in an equally fatal insensibility.

The remedy which for some years has been employed for the accomplishment of this object is chloroform. It has been extensively used, and is, I believe, regarded as the readiest and safest means for controlling uræmic convulsions.

Dr. Baun says, in regard to it, that chloroform narcotism should be induced instantly when indications of an impending paroxysm show themselves, but that the administration of chloroform must not be kept up during the convulsive attack or the state of coma.

Dr. Roberts says that during the convulsive paroxysm, chloroform inhalation is the most