endured it without complaint, and the doctors are astonished at the wonderful vitality of the wounded Turks, who recover with remarkable rapidity. This with good reason is attributed to their abstemious lives.

It has been stated that the Moqui Indians handle the rattlesnake with impunity, and are not inconvenienced by the occasional bite of the animal.

The rational treatment of animal poison is to endeavor to prevent the entry of the virus into the circulation, to neutralize it in the wound before it is absorbed, but when it has entered the system then everything should be done for its elimination.

The most powerful aid to the human system, and the most perfect eliminator known to man is heat. It is used with much advantage and great success by means of water, both internally and externally, but above all is its use by hot air, as in the Turkish bath, which works in harmony with every natural function, promoting the action of all the secretions and more particularly the excretions. By this means will the system unload itself of an accumulation of impurities in an incredibly short space of time, while the heat aids in destroying whatever there may be of virus therein.

Calmette, whom we have previously quoted, has shown that whatever be the source of snake venom, its active principle is destroyed by being submitted to a temperature of about 212 degrees for a variable length of time.

In the not remote future thousands of human beings will owe to the Turkish bath not only an immunity from disease in general, but also an escape from the horrors of a premature death from hydrophobia, the poison of snake bite or the slower action of infectious disease.

The mass of testimony that has been accumulating for over thirty years past is more than sufficient to convince any reasonable mind that is willing to examine the facts.

The medical profession has searched the world over and under for the means of controlling disease, while within the human body itself lies the vital power which needs only to be cultivated and exalted to its true function to banish the mass of disease from the land.

THE THERAPEUTICS OF ALCOHOL IN DISEASE.

Presented in the Section on State Medicine, at the Forty-eighth Annual Meeting of the American Medical Association, held at Philadelphia, June 1-4, 1897.

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Ever since the days of Æsculapius, the "Blameless Physician" who went about healing and raising from the dead until finally killed by the thunderbolt of Pluto, the progress of medicine has been a struggle. Its history reads almost like a fable. In those days great temples were built in honor of this Father of medicine, and even snakes were believed to receive healing power from his hand. These endowed serpents were sought after by the Greeks and Romans during epidemics, in the hope of their being able in some way to allay suffering and drive away disease.

On this shaky foundation began the struggle of scientific medication, and in this early beginning we find empiricism to be the key-note of therapeutics. Remedies were used in the treatment of disease that

possessed a supposed medicinal power or charm that would in some way bring about a cure. Those who practiced medicine were usually an uneducated class of barbers or quacks, who had more influence from the appearance of their dress than from their learning. The same may be said of the pupil, whose student life was judged more from the number of scars on his body than from his profound knowledge.

Yet in all this ignorance and mysticism we find here and there a bright light who would shine out from among the darkness and shadows around him and bring forth some new medical idea or theory that has stood the test of ages. We shall refer to a few as we pass. Vesalius, who after the publication of his great work on anatomy became physician to Philip II., and whose useful life was cut short by his being shipwrecked on the Island of Zante as he was returning from a trip to Palestine; Paracelsus, who was the greatest military surgeon of the sixteenth century, even though he burned the books of Hippocrates and Galen in contempt. We need but mention such names as Harvey, Paré and Jenner, whose great life-work we celebrated so fittingly at our last meeting. These able men with many others have left "foot-prints on the sands of time." And among the great constellation of medical stars we find some of lesser light whose brightness has long since faded. Hence we naturally think of Hahnemann, who was born in the year 1755, and after practicing medicine for ten or twelve years without success, began the translation of medical books, and when he came to the subject of Peruvian bark became so mystified that he began taking repeated doses to find out its action on a person in health; and while under its tonic influence his mind became so clouded that he gave to the world his theory of *similia similibus curanter*.

The blazing glory of this unscientific principle has long since faded in European countries, and its American brightness has been waning until at the present time we can find only here and there a disciple who is bold enough to announce on his office sign the title "Homeopathy." It now stands on an equality with "mesmerism," "Thompsonianism," "faith cure," "specific medication," etc.

Thus we see what a struggle scientific medicine has had in the past, and is it any wonder that it has come down to us, at the close of the nineteenth century, laden with errors and extravagant ideas in reference to the therapeutics of many remedies?

We hear it said that surgery has made great progress in the last few decades. The same can be said of therapeutics. Think of the shotgun prescriptions of the past. Who would dare write one today? The old "ten, ten" is written no more. The "thumb-lance" has taken its place among the curiosities of relic collectors.

The striped pole of the barber has lost its original significance. Yet while great changes have taken place in the vast domain of medicine, some therapeutic agents, by the great hold they have had on the popular minds of the laity and some physicians, have held on remarkably well.

The most important of these, and the one that concerns us most in this paper, is alcohol, for in some form it has retained a place in therapeutics ever since the people were advised to "take a little wine for their stomach's sake."

The distillation or production of alcohol originated, no doubt, among the Chinese; but the term came

with other chemic knowledge through the Arabs. And notwithstanding the progress of therapeutics, alcoholic prescriptions have kept pace and by many have held their original importance. It is only during the last few years that its use in the treatment of disease has been checked, and for this, thanks be to the American Medical Temperance Association and other similar organizations, and to such noble investigators and experimenters as Richardson, Davis, Kellogg, Crothers and others, whose sole object is the scientific investigation of the subject.

In this work in the past there has been a great struggle on account of the popular ideas of the laity and the teachings of many of our text-books on therapeutics and practice.

It has been demonstrated beyond any doubt that alcohol interferes with normal digestion. In those experiments made by Drs. Chittenden, Kellogg and others, it is conclusively shown that alcohol in any quantity or form taken into the stomach inhibits or neutralizes the gastric juice. Hence the use of alcohol is contraindicated in the treatment of all forms of stomach ailments, whether acute or chronic.

Now, what is the effect of alcohol on the normal resistance of the human body to disease? It is not necessary to refer to the experiments of Berkely and others, and especially those of Frank H. Hamilton, for every physician who is a general practitioner has had frequent opportunities of observing how readily those who are habitual drinkers succumb to disease.

This fact is well demonstrated in military life, as well as by those who endure great hardships in exploration and navigation; neither can alcoholics stand the extremes of heat and cold as well as the non-alcoholic.

In shock it is of no benefit and adds greatly to the danger. The same is true whether the shock is accidental, surgical, anesthetic or toxic.

Now, lest our paper should be too lengthy, we will hasten to a series of conclusions in regard to the therapeutics of alcohol that we believe are so well established on scientific principles, and as the result of the most scientific investigators of the present day, that they will not be questioned, and if so, then in the light of scientific investigation can easily be defended.

1. Alcohol is an anesthetic instead of a stimulant, and the apparent stimulating effects of its use are delusive.

2. The beneficial effects attributed to its use by alcoholic advocates are due to its paralyzing influence on the nerve centers.

3. Its use greatly interferes with the elimination of urea and other poisonous products, thereby rendering the system more liable to disease.

4. It impairs the co-ordinating powers of the brain and diminishes cerebral activity to such an extent that we have an abnormal action of the nerve centers.

5. It is of no benefit in any of the acute diseases, but greatly complicates the conditions and renders the chances of recovery much less than without it, and to use it in chronic diseases only adds fuel to the fire and substitutes a disease of alcoholism for the one under which the patient is suffering. And if it is of any benefit, it simply keeps up an anesthetic condition of the nerve centers to such an extent that the patient is not conscious of his sufferings.

6. Therefore, we believe that in the scientific light of the closing of this century alcohol should be classed among the anesthetics and poisons, and take

its place in therapeutics along beside chloroform, cocain, morphin, chloral, etc., and that our success as physicians will be much better if we abstain entirely from its use in the treatment of disease, and that the beginning of the twentieth century will mark an era in therapeutics.

The shadows of the empiricism of the past shall give way to the light of the scientific medication of the future.

THE TREATMENT OF DIPHTHERIA WITHOUT ALCOHOL, WITH REPORT OF CASES.

Presented to the Section on State Medicine at the Forty-eighth Annual Meeting of the American Medical Association, held at Philadelphia, Pa., June 1-4, 1897.

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That diphtheria is an infectious disease, with a specific poison, is universally believed by the medical profession. Whether there are two forms of the disease, the result of different bacteria, is still a mooted question. I believe there are two forms. Just at present, quite as much attention is being given to the treatment as to the nature and cause of the disease. And while the war of words is still raging, and clinical reports both favor and oppose the antitoxin treatment, while judges as well as jurors disagree as to the merits and demerits of this new remedy, I find that whichever line of treatment is followed, the greater part of the medical profession still cling to the belief that alcohol, usually in the form of whisky, is a necessity. Believing that alcoholic stimulants are *not* necessary, but rather are injurious in diphtheria, my purpose in presenting this paper is to call your attention to a line of treatment less dangerous, and attended with better results than when alcohol is used.

Previous to commencing in general practice, I had seen less than half a dozen cases, including an attack I myself had. The first was soon after the disease appeared in the United States in 1856. The case was that of a young lady, a member of a family all suffering from throat trouble, and who had had a similar attack the previous winter. I well remember the white glistening membrane covering the lips and tongue, and its beaded appearance, but I know nothing of the treatment.

The attack from which I suffered was during my college course in 1873. At that time I was with a homeopathic physician who gave me some pink powders. Not satisfied with the results, I applied to a physician of the regular school. He prescribed tinctura ferri chlor., with potassii chlor., also quinia powders and a generous diet. His directions were, "Eat, eat all the beefsteak you can." For the first day swallowing was exceedingly difficult and painful, but I persevered and made a rapid recovery, with no symptoms of heart failure; no whisky or brandy; no alcohol except that in the tincture of iron. The treatment of the three cases which came under my observation while in hospital and dispensary practice was similar to the foregoing, with local applications of glycerin and tannic acid added.

Case 1.—My first case after entering on general practice was that of a young woman student, 16 years of age. Her home at the time was a public boarding-house. The disease when first seen was not far enough developed to determine its nature, and as sore throats were prevalent, I prescribed a gargle and