

gree, the patient is safe, so long as it can be maintained. Ten or twelve grains of the salt every two hours is sufficient for this purpose.

As the disease progresses, and there is less need for a sedative, or if diarrhœa supervenes, the acetate of ammonia is substituted for the nitrate, and acetate of lead and opium are at the same time administered.

If nervous symptoms show themselves with a failure of the vital powers, the carbonate of ammonia in combination with potassium chlorate is resorted to; but if coma develops, recourse is had to the hydrochlorate of ammonia, generally in five grain doses, every two hours. The effect of this is magical. The doctor stated that he had never seen coma in a case which had been treated from the beginning with this ammoniacal course, and had only seen it in badly-nursed cases, or in those treated by other means.

He considered the delirium of typhoid fever to be due to deficient nourishment, a delirium of starvation. It never fails to become quieted in a few hours after the free administration of ammonia. Wandering sometimes occurs if the dose is too small or the intervals between are too long. Patients sometimes ask to have the intervals shortened on account of a confusion of intellect, which appears when the dose has been postponed too long.

For tympanites, turpentine is used by enema or by the mouth.

The pathological condition contended by some to exist in, and be the cause of coma, is a thickened condition of the envelopes of the blood corpuscles, on account of which the brain fails to be nourished, even though the blood contains the normal amount of nourishment. This condition suggested the hydrochlorate of ammonia as a solvent for the thickened envelope; but whether this be its *modus operandi* or not, its effect is almost miraculous. Thus it will be seen that there is no stage of the disease in which one or other salt of ammonia is not used.

Why should cold baths and affusion be used when the temperature can be reduced by simpler and safer means and without the danger of reaction? The author long since abandoned quinine as not being the proper germicide for the typhoid-fever parasite. It is, however, the antidote *par excellence* for the malarial poison, but, as the typhoid fever producing organism differs so essentially from that of malarial fever, it could not be expected that the same agent would destroy both. The parasite of malarial fever is a carbon-feeder, and that highly carbonaceous medicament, quinine, might be expected to be the best agent for destroying it, in accordance with the law (for which the doctor has been contending), viz., "that no organism can live in its own excreta, in the results of its life processes." If carbonic acid gas be thrown off as the excretory product of a life process, a saturation of that gas will check the process and destroy the life. If alcohol be the result, then alcohol is the proper agent to destroy

the organism causing it. If sulphuretted hydrogen be evolved, then the compounds of sulphur are the most efficient means of checking the process. So, then, when ammonia is the excretory product, as in typhoid fever, ammonia, as has been shown, is the most efficient germicide. This furnishes us with an additional reason for employing the salts of ammonia, for this nitrogenous base not only supplies the nitrogenous waste but also destroys the vitality of the organism which causes it.

If this be a law, instead of accounting for the protection of the system against a second attack of contagious zymotic diseases by supposing that it is due to exhaustion of the pabulum necessary for the support of the parasite, why not attribute it to the infusion into the system of some excretory product which forever acts as a poison to the parasitic organism? This is the most probable explanation.

With regard to the period of this fever. If it is recognized as early as the third day, it may subside at the end of the first septenary, but if not recognized before the fourth or fifth day it cannot break before the end of the second septenary, but may at that time. If the treatment has not been inaugurated before the beginning of the second septenary the fever cannot be made to yield before the end of the third septenary (the 21st day). That it will yield on that day is almost an absolute certainty.

With regard to the diet, nothing is allowed but milk. Farinaceous preparations are never admissible. They cannot be digested for want of the fluids containing diastase. There cannot be any conversion of amylaceous food into dextrine or grape sugar, so then starchy food cannot be assimilated. If administered, they undergo a fermentation which adds to the gaseous distention and greatly complicates the case.

Animal broths are never allowed until the later stages of the disease, or until there are signs of the secretion of the digestive fluids.

In conclusion the doctor said, "The limited time allowed for this paper has compelled merely an outline of a subject which deserves full discussion. It is left to the profession to test the value of the treatment which has been detailed.—*Maryland Med. Jour.*

#### NEW HEMOSTATIC AGENT.

Dr. Spaak employs two parts of chloroform to 200 parts of water as a hemostatic in operations on the mouth and throat, and claims that patients thus treated suffer but slight hemorrhage.

He also uses the chloroform water as a spray after excision of the tonsils. This chloroform water seems to close the open mouths of all small blood-vessels instantly.—*Journal de Medicine, Brussels, Belgium.*