

many and various organs through the circulation, showing most in that organ where meeting the least resistance.

Finally, mental disease is intimately related to these arterial changes. The cortical cell under such unfavorable circumstances must necessarily suffer, and this can be demonstrated easily enough. The characteristic mental expression of atheroma is a dementia, though not without some outbreak of excitement. PHELPS.

THE CONNECTION OF INTESTINAL AUTOTOXIS WITH CERTAIN COMMON FORMS OF INSANITY. The New York Medical Journal, Oct. 31, and Nov. 14, 1896. By Allan McLane Hamilton, M.D.

Dr. Hamilton injected a number of rabbits with the urine from persons suffering from mental disease, but the results were not characteristic or constant, and he was obliged to abandon the idea that the excreta, in certain forms of insanity, present specific toxic qualities.

He is unwilling to ascribe as much to the influence of uric acid in mental disease as is often claimed. It may be that in certain cases the presence of uric acid is indicative of poisoning due to the destructive metabolism of nuclein, and the initial destruction may be the result of primary intestinal disorder.

He obtained no satisfactory results, as far as the production of symptoms of any kind was concerned, from a series of experiments on rabbits and monkeys with hypoxanthine mixed with the food. It is probable that the intestinal toxalbumins have more to do with the production of disturbance of the nervous system than the leucomaines.

When the gastro-intestinal tract is deranged, certain very virulent toxic agents may be introduced into the general circulation and act mainly upon the nervous system. Especially is this true of the rapidly developing confusional insanities, although in the chronic forms of insanity the occurrence of accés and convulsions is attended with some defect of metabolism.

His conclusions are:

1. Urines rich in indican contain very little or no preformed sulphuric acid, and are toxic.

2. When the sulphate ratio is materially changed, it is likely to indicate autotoxis in connection with an increase in the amount of combined or etheral sulphates.

Such indications are generally found with acute insanities, in which rapidly developing symptoms occur.

4. Fugacious and changing illusions and hallucinations, unsystematized delusions, confusion and verbigeration in connection with insomnia, pallor, intestinal indigestion, constipation and rapid exhaustion are due to autotoxis.

5. Paranoiac states, or those in which concepts are the features, chronic stuporous conditions, and certain forms of dementia have little to do with the formation of intestinal products of putrefaction.

6. Various post-febrile, traumatic, alcoholic, or drug insanities are those in which autotoxis is most constant.

7. The variations in the excretion of combined sulphates keep pace with the changes in the progress of an established insanity, accés and epileptoid attacks being directly connected with putrefactive processes.

8. The most successful treatment consists in lavage, intestinal douches, gastric and intestinal antiseptics by means of hydrochloric acid, borax, salicylate of sodium, charcoal, guaiacol, or naphthalin in small repeated doses and in the administration of a combination of the red marrow from the small bones, blood and glycerin.

SPILLER.