

learn on this subject, and the parents know absolutely nothing of it. As to the latter, their ignorance is pardonable; as to the former, our medical schools are to a certain degree primarily to blame, for far too little stress is laid on the importance of prophylactic measures and the necessity of immediate and proper attention when once the disease is established. This fault is not solely confined to our weaker schools, for graduates of our larger and better ones are too often in error, also.

Credé brought the incidence of cases in his lying-in clinics from 20% down to .2% by a very simple routine procedure: As soon as the babe is born, even before the cord is cut, its eyes are carefully washed out with a warm solution of boracic acid; then later, while the child is being bathed, a drop of either 2% silver nitrate (never stronger), 25% argyrol, or 10% protargol is instilled into either eye. This method is compulsory in many foreign countries and in many states of our own country; and the results in those places where the law is faithfully enforced are sufficiently gratifying to brand it as a good one.

The only objection to this method seems to be a pretty weak one: physicians complain that the parents frequently consider it as an insinuation as to the purity of themselves, and thereby the physician's practice is injured. This argument seems easily met if it is explained that ophthalmia is not necessarily caused by the gonococcus alone, but may be due to any of the many varieties of bacteria found in the birth canal of the mother. Surely every physician would insist on similar precautions if the child was his own.

As stated above, prophylaxis is made compulsory by law in some foreign countries and also in some of the states of this country. Where the letter of the law is enforced, its value is easily proved; but too often it seems that the spirit of it is lacking in too great an extent, and it is little more than worthless. Indeed, our own law, although only a compromise, is, as at present enforced, much more efficient. But, sad to relate, there have been several cases in which, although report was made to the local board of health in due season, no action was taken by either them or the physician to insure proper care till too late. So it does not seem out of place here to urge those officials who have so effectively prosecuted neglectful physicians in not properly reporting cases, to be equally assiduous in carrying on their part after once they are aware of the existence of the disease.

Credé's method is the one more generally used in this country and, as stated before, has been proven an efficient one. In other countries particularly, other methods have been used with equal and sometimes better success. In France, Valude states, in comparing the relative efficiency of various measures used prophylactically in the Hospital St. Louis, that it was found that iodoform powder dusted into the eyes before the section of the cord brought occurrence of the disease down to 5% of all births where with the use of silver it had been 7 to 8%. Equally remarkable results were obtained in the Hospital

Parnier, where its occurrence was reduced from 6% to 2%. The carefully directed use of boracic acid and the silver preparations we believe here to be of as great efficiency, however.

The physician's responsibility does not rest with the use of prophylactic measures alone, for our therapeutics are by no means infallible; as careful observation should be made of the child's eyes at each visit as is made of the cord stump, or of the temperature or pulse of the mother; this observation to be made under a good light and particular note made of any swelling, redness or discharge. Probably many of those practitioners who conscientiously use prophylaxis as routine fail to consider these latter important duties.

Once the disease established, what should the physician do? Textbooks are numerous and quite fully explain the therapeutic measures to be applied; hence it seems needless to propound them here. One important fact they do not mention, however, is the absolute necessity of careful and efficient nursing. The importance is but recently emphasized by a case which not long since came under our observation, — that of a small child with purulent ophthalmia, probably of an otherwise benign type, who through the diligence of the attendant in her efforts to wipe away all the secretion had lost most of the epithelial layer of his cornea, and so given the infecting organisms the chance to ravage the deeper layers of that structure at will; the result, a blind baby. The other extreme, that of not sufficiently washing away the discharge, is probably more frequently the fault. This is inestimably important, for washing away the rapidly increasing discharge is undoubtedly more efficient in combatting the disease than all the various germicidal agents employed. The attending physician should make himself responsible that all these precautions are properly heeded and the attendants properly instructed; and, furthermore, himself watch the cornea for even the slightest haziness, a warning, but often seen too late.

Now considering all; how many physicians in this state feel that they are conscientiously doing their part in the prevention of this dread disease? Truly, their part is the important one, and the value of their efforts is to be appreciated most fully by the next generation. Until we have corrected our inefficiencies we cannot hope to be taken seriously as the teachers of others. The fact remains, — blindness occurs almost daily as the result of conditions insufficiently appreciated by the physicians of our state.

### Clinical Department.

#### SALVARSAN AND MEASLES: A CLINICAL NOTE.

BY LOUIS L. WILLIAMS, M.D., BOSTON,

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L. M., male, twenty-two, mulatto, suffering from secondary syphilis with slight glandular enlargement and syphilitic orchitis (Noguchi reaction positive)

was given .6 gm. of salvarsan intravenously on March 31, 1912. He vomited during the night and on the morning of March 31, 1912, had a temperature of 40° C.

April 1: Temperature, 39° C., and slight coryza.

April 2: Temperature 38° C. A typical measles eruption has developed. Koplik spots are seen on the buccal mucosa, and the conjunctivæ are injected. The attack of measles pursued a mild but typical course, the temperature becoming normal on April 4.

The injection was evidently given a few hours only before the onset of measles and seems to afford some evidence that salvarsan does not affect the development and course of the latter disease. In view of the antagonism of salvarsan to some of the pathogenic protozoa, the coincidence noted above may have some bearing upon the question of the nature of the organism concerned in the causation of measles.

## Reports of Societies.

### THE AMERICAN ASSOCIATION FOR CANCER RESEARCH.

FIFTH ANNUAL MEETING, PHILADELPHIA, APRIL 3 AND 4, 1912.

- (a) FURTHER STUDIES ON THE NATURE OF CANCER IMMUNITY THROUGH THE CULTIVATION OF TISSUES OUTSIDE THE BODY.
- (b) A COMPARATIVE STUDY OF NORMAL CELLS AND CANCER CELLS IN TISSUE CULTURES.

DR. R. A. LAMBERT, New York: The results of the experimental work point to the presence of an antagonistic element in the plasma of the other animal rather than to a mere absence of suitable foodstuff. The recognized difference in the behavior of cancer cells and normal cells in the body are also found in cultures.

The growth from frozen tissue was quite good, although not so extensive as with untreated tissue. Animal inoculation from the frozen tissue was positive. Embryonic tissue that has been frozen at various temperatures showed that there was no certain low point at which the cells were killed or survived. The effect of heat confirmed Dr. Loeb's results that 45° for an hour destroyed the cells. We used the hot-air incubator, the results with which must differ from those obtained with the water-bath. There is apparently no great difference in the resistance to heat between normal and tumor cells.

#### DISCUSSION.

DR. LEO LOEB, St. Louis, President of the Association: In several communications, I have drawn attention to the differences between normal and cancer tissue. On the whole, I did not find any marked qualitative difference, but there are a number of quantitative differences, in the activity of growth, in the invading and phagocytic properties and in the resistance to injurious influences.

DR. W. GAY EWING: I never succeeded in getting dog-tumor cells to grow in dog-plasma, except in one case. I concluded that dog-tumor cells possess much less capacity to grow in these conditions than do the tumor cells of lower animals.

DR. G. N. CALKINS, New York: I should like to ask whether the cells degenerated at all in the process of growth.

DR. LAMBERT: The cells did degenerate. This made it necessary continuously to transfer the tissues, in order to keep them growing.

- (a) TUMOR INOCULATION INTO ORGANS, AND THE ANALOGY BETWEEN THE TUMORS OF THE WHITE MICE AND RATS AND HUMAN CANCER.
- (b) CHANGES IN THE TISSUE SURROUNDING A GROWING TUMOR, AND THE SIGNIFICANCE OF THE PRE-CANCEROUS STATE.

DR. ISAAC LEVIN, New York: (b) Some men claim that the inflammatory or other abnormal condition preceding the development of cancer is the main condition in the genesis of malignant tumor. Others claim that the condition is the result of the irritation upon the surrounding tissue caused by the growing cancer. We usually meet the two conditions side by side, and it is very difficult to decide which is the one that precedes the other in time. To determine this, I made an experimental study of tumors of white rats and mice. The conclusion that I have drawn from this study is that a pre-cancerous condition may exist in some cases, but that in others, the so-called pre-cancerous condition may actually be a post-cancerous one. We ought to consider that in any region in which a cancer develops and grows, there is a peculiar interaction between the normal organ cells and the cancer cells. The main factor in the growth of cancer in the organ is the general resistance or general susceptibility of the organ.

(a) Von Hanseemann, in a recent publication, has expressed himself very emphatically against any analogy between human cancer and the tumors of rats and mice. I decided to take up the study of this subject anew to show that in my estimation he is not correct. My studies showed that the spontaneous tumors of rats and mice are malignant in their biological behavior. In regard to the inoculated tumors, I believe that all those characteristics which make for a more benign growth in them are due to the technic employed in the inoculation. My investigations for the last year or so, in inoculating the same tumors into different parenchymatous organs, have shown me that these tumors behave like actual malignant growths, quite differently from the way in which they behave when inoculated subcutaneously.

#### DISCUSSION.

DR. C. O'CONNEL: In one instance, after having removed a large subcutaneous growth from a mouse, I found a metastasis in the lung, showing infiltrated structure with replacement.

DR. JANEWAY: Two years ago, I demonstrated sections from very early epitheliomata of the skin obtained from a number of cases with multiple epitheliomata of the tissues. In them, there was no change in the surrounding tissue.

DR. E. E. TYZZER, Boston: It looks to me as if this inflammatory condition that Dr. Levin produced were a pre-implantation state, rather than a pre-cancerous one.

DR. LOEB: Dr. Levin's observations bear on the growth of cancer, while the pre-cancerous conditions are supposed to be responsible for a transformation of normal into cancerous tissue.

DR. H. GIDEON WELLS, Chicago: The cancer cells appear a certain distance from the blood vessels, in both the mouse and the human being; but this distance is much larger in proportion to the size of the mouse than to that of the human being. This explains the discrepancy between the size of the tumors in man and in animals. I believe that one can study pre-cancerous conditions without knowing anything at all about the