

The fifth case occurring about the same time was one of old pelvic inflammation, in which existed a cavity containing pus from the surrounding inflammation, urine from a fistulous opening into the bladder and faeces from the rectum.

E. L. D., married, thirty-three years old, entered January 1, 1889. She had had four children, but no miscarriages. Two years before she had been very ill with "pelvic peritonitis," the cause of which was unknown. She had since been an invalid. Three months previous, she had increased trouble, followed by a discharge of pus from the bladder. Shortly before entrance she had been seen by Dr. J. W. Elliot, who advised her to come to the hospital.

An examination at entrance showed a general matting together of the pelvic contents. There was also considerable fever. The patient's condition was very poor, and improved very little under a month's careful treatment. The urine during this time before the operation contained pus and faecal matter, accompanied by frequent passing of gas by the urethra.

The patient was operated upon February 7, 1889. There was no indication of trouble outside of the pelvis, but here there were general adhesions. A thickened mass, just to the left of the uterus, was opened, and about a drachm of pus found. The right tube and ovary were in a very fair condition. The patient rallied well, but died five days after the operation from exhaustion.

This case was regarded as a very unfavorable one for operation, owing to the patient's feeble condition; but as cure seemed impossible by other means, the patient's strength was improved as much as possible, and a comparatively favorable moment selected for opening the suppurating cavity.

A NOTE ON EXTRACTS FROM TUBERCLE CULTURES.¹

BY J. A. JEFFRIES, M.D.

I THOUGHT it might be of interest to report a few of my results with extracts of pure cultures of the tubercle bacillus. I began a year ago to make extracts and study their effects on guinea-pigs, my ultimate object being to produce immunity or find some form of treatment. At first I used alcohol (absolute and dilute), ether, chloroform and benzole, and found that my results were very variable, not regular. After this, in the early part of last summer, I began to prepare glycerine extracts, reasoning from the power of glycerine pepsin extracts. With glycerine I soon found that more or less definite reactions could be produced by large doses in healthy guinea-pigs. There would be swelling at the point of injection, evident discomfort, an increase of urine and at times fever, etc.

Owing to sickness in my family nothing more was done until after Professor Koch's first publication. I at once found that my glycerine extracts produced a much more marked effect in tuberculous than in healthy guinea-pigs. The former, after a dose of half a cubic centigramme, would, in the course of a few hours become very sick, huddle up in a corner with hair on ends, shiver, and in some cases pant. Apparently the amount of urine was increased. Tuberculous guinea-pigs, while in the reaction, could be laid down anywhere and did not run away.

¹ Read at the Boston Society of Medical Sciences, January 27, 1891.

All my animals, both those inoculated with the extract alone and those first poisoned with pure cultures of the tubercle bacillus were then put under like conditions to note results as to longevity. Unfortunately a bull-terrier made a raid on my guinea-pigs during the latter part of December, and again on the 8th of January, killed most of my control animals, and thus ruined the experiments as to final results. So that all I can affirm is that some of my glycerine extracts of about forty-five per cent. final strength, allowed to stand at a temperature of $37\frac{1}{2}^{\circ}$ C. for one week contain a substance which causes a much more marked reaction in tuberculous than in healthy guinea-pigs; and that for two or three weeks after the former appeared better than the simply tuberculous control animals.

I have not, of course, got far enough to say if such an extract will invariably work, or to what extent it will mitigate the action of the bacilli. Nor do I yet know how old a culture should be, the best medium to grow it on, nor if the extract should be made neutral or slightly acidified. I might add that I found no signs of tuberculosis in a guinea-pig which had received one and a half cubic centigramme of my extract in divided doses, and was then inoculated with tubercle culture in the abdomen. Too much weight cannot be laid on this, however, as the animal was very badly crushed by the dog eighteen days later — other guinea-pigs inoculated in the same way with cultures died of tuberculosis in about a month.

In closing, I would state that this is only read in view of Professor Koch's latest announcement as printed in the newspapers of January 15th, from which I should judge that, working in somewhat the same line and stimulated by his first article, I have got something on the same principle, but am not sure, as I have been unable to procure an atom of the paratoid for any purpose.

Clinical Department.

A NEW SOURCE OF ARSENIC POISONING.

BY WILLIAM N. SWIFT, M.D., NEW BEDFORD.

F. H. S., six years old, perfectly healthy baby. After the age of two, he began occasionally to look badly. At these times his bowels were constipated, his breath rather offensive, his tongue coated. He was somewhat salivated, and had at times a few superficial ulcers on the mucous surface of the lips, gums, or tongue. No explanation could be found for this condition, except that he always had a good appetite, and was in the habit, unless watched carefully, of bolting his food. His diet had always been regulated with much care.

In January, 1890, he had the epidemic influenza, and as he was at its onset in one of his debilitated conditions, he was very much pulled down by the illness. During the summer he was in the country, and was perfectly well. When he returned home, he began, in a short time, to look badly. He became anæmic, began to lose weight, and his muscles became soft and flabby. He was constipated. His tongue was coated, and the whole mucous membrane of the mouth became soft and spongy. His breath was offensive. He complained of weakness and occasional cramps in the muscles of the legs when walking. He had to be taken up two or