

acne, sycosis, felons, and many cases of sepsis and persistent sinuses, etc.

Class 2.—In this class are those cases in which autoinoculation is the characteristic feature. The more severe cases of pulmonary tuberculosis may be taken as the type. The outstanding feature of these cases is the fluctuation of the opsonic power of the blood from low to high and high to low.

Class 3.—This class comprises the pure septicemias. It is probable (though not yet proved) that certain of these have a generally lowered opsonic power for reasons that need not be discussed. Here are included ulcerative endocarditis, puerperal septicemia, etc.

It is in the first great class, however, where the infection is localized and where in consequence autoinoculation is withheld that inoculation with bacterial vaccines has been most successful. I propose to summarize briefly the results that have been obtained,

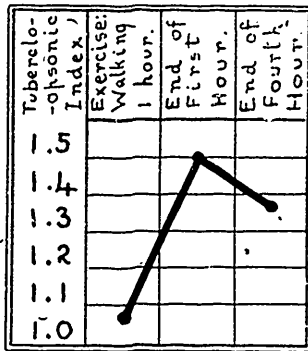


Fig. 1.—Chart illustrating "auto-inoculation" in a case of moderately severe pulmonary tuberculosis as a result of an hour's walk. The tracing shows the variation of the tuberculo-opsonic index.

but especially to refer to cases that have come within my own experience; let me, however, first present the immunizator's method of approach by citing a particular case.

History.—The patient was a young man, aged 20, who seven weeks previously had had an empyema evacuated by resection of a rib. The daily discharge had slowly lessened to about half an ounce of pus, which gave a pure culture of the pneumococcus of Fränkel. With this bacterium as the basis of my further investigation, I determined his opsonic index and found it normal. Nevertheless, I thought that I might expedite matters if I raised this index and so I prepared him a vaccine by growing the pneumococcus in culture tubes, collecting the growth in salt solution and killing it at 60 C. (140 F.). Of this vaccine, I inoculated 100 millions of pneumococci with the result that his opsonic index rose quickly to 2.5. Further inoculations raised his index when