

regard to pulmonary disease, tuberculin is especially valuable when the physical examination is inconclusive, and either no sputum whatever can be obtained, or repeated examinations have proved entirely negative, while the suspicion yet remains that the disease may be of tuberculous nature.

Introduced to the medical profession in 1890, by Koch as a remedy for tuberculosis, tuberculin rapidly fell into disfavour as a remedial agent, when it was considered proved that, as used at the time in large doses, it lighted up old tuberculous foci into fresh activity, and tended to disseminate tubercle bacilli into previously healthy parts of the patient's body. In the disappointment that followed this fiasco there were few who remembered that Koch, while speaking of the curative properties of the lymph, had also stated incidentally, that in certain cases tuberculin might prove of value in detecting latent tuberculous foci in various parts of the body. A few of the more sober minded clinicians, however, did remember this statement and put it to practical use. Since that time an ever increasing mass of evidence has accumulated proving the truth of Koch's original observation. In addition to Koch,—Guttman, Ehrlich, Wasserman, Benz, von Jaksch, Landouzy, Trudeau, Penzoldt, Klebs, Beck, Shattuck, and many others both in America and in Europe, have used tuberculin as a diagnostic medium, and all agree in recognising it as harmless and most reliable when used with proper precautions.

The tuberculin reaction consists in an elevation of temperature with a characteristic pyrexial curve, accompanied by more or less malaise, pains in the head, back, and limbs, and sometimes nausea and vomiting. The reaction occurs usually about twelve hours after the injection of a minute dose of tuberculin. It may, however, occur at the end of eight or nine hours, or rarely be delayed to twenty-four hours. The pyrexial curve is quite characteristic; there is a rather abrupt rise to a maximum which is maintained for two or three hours, and then a gradual decline to the normal which is usually reached in from twenty-four to thirty-six hours, and is followed by a subnormal temperature for some time. With the fall of temperature the constitutional symptoms above described subside gradually and the patient returns to his usual state of health. The chart on the opposite page depicts a typical reaction in a tuberculous case.

The method of employing the test is as follows:—For one or two days before the tuberculin is used the patient's temperature is taken at frequent intervals, at least every four hours, and better every two hours, in order that a correct idea of the range of the temperature may be obtained. The injection, with the usual aseptic precautions, is made either early in the morning at six or eight o'clock, or late in the evening at ten or eleven o'clock, so that the reaction may be observed at a con-