

PUBLIC HEALTH

TB Vaccination Debated

One authority believes it may act as smoke screen to hide germs, and defeat action of chemical weapons. Another just as strongly in favor of vaccines.

➤ BCG AND OTHER anti-tuberculosis vaccines will defeat efforts to wipe out the white plague and block the chances of streptomycin or other chemical conquest of it, one noted tuberculosis authority, Dr. J. Arthur Myers of the University of Minnesota Medical School, declared before the American Public Health Association meeting in Atlantic City.

Vaccination was equally strongly recommended as one of four measures for fighting TB in a report at the same session by another distinguished TB fighter, Dr. F. M. Pottenger of the Pottenger Sanatorium and Clinic for Diseases of the Chest, Monrovia, Calif.

Vaccines against tuberculosis would act as smoke screens, hiding the TB germs, Dr. Myers declared. They sensitize the body tissues to the protein of the germ, he explained. This makes useless the best of anti-TB weapons, the tuberculin test, because this test detects the presence of the germs in the patient's body through the sensitization they have set up.

Every case of tuberculosis can be diagnosed by this test within seven weeks after the germs have invaded the body. At this period X-rays and all other methods of examination fail in 90% to 95% of the cases. Yet it is at this time and for a few months thereafter that streptomycin may have its greatest usefulness as a remedy for the disease.

TB-fighting without vaccines has been so successful in Minnesota that authorities there now speak of eradication of the disease, Dr. Myers said. Among children in the 277 schools of a four-county sanatorium district tuberculosis infection has decreased from 14% in 1930 to 2.5% in 1947. In 219 of these schools, no child reacts to tuberculin, meaning no child has been infected by the germs of tuberculosis. Only five to eight per 100 of senior high school students in several counties have been infected. In the state's largest city, with a population of 500,000, the germs attack less than one out of each 100 of the population (0.33%) each year. Of 100 babies born, it is three years before one is infected with TB germs.

Vaccination was urged by Dr. Pottenger to protect children and others who are in contact with the "cured" patient who still scatters occasional, or "rare," tuberculosis germs.

The number of such germs may amount to a few hundreds or thousands daily from a single patient, contrasted with the hundreds of millions and even billions of TB germs expectorated daily by a patient with acute tuberculosis. Counts of the daily TB germ output by patients in various stages of the disease are possible through a sensitive technique developed at the Pottenger Clinic.

The patient who scatters the "rare" tuberculosis germs cannot be taken out of society, Dr. Myers stated. He is physically well, able to walk from one to five miles, and can carry on his regular work.

How dangerous his rare germs may be no one knows. His care in destroying the sputum, conditions of light and ventilation in his home and work place and the resistance of his associates to tuberculosis may make these "rare" germs more or less dangerous.

Vaccination should not take the place of other TB-fighting measures, Dr. Pottenger said. Active cases of tuberculosis should be sought out and given a chance to get well. TB should also be fought, he advises, by "clearing the slums in which most of our tuberculosis is found; teaching people how to live and what to eat, and furnishing food at least to children when the bread-winner is ill, so that resistance is kept high."

An argument for TB vaccination can even be found, Dr. Pottenger pointed out, in the Lubeck disaster. In that small German town 252 children under 10 days old were each given 1,200,000,000 living virulent human TB germs by mistake for BCG, the anti-TB vaccine made from germs so weakened they have lost their power to cause the disease. According to general opinion, all these babies should have died, Dr. Pottenger stated. Instead, 175 were living and well four years later. All were infected but almost three-fourths (70%) had developed sufficient resistance to prevent the spread of the disease.

Countering this, Dr. Myers quoted figures showing BCG vaccination has not produced anything like as good results in reducing TB death rates as sound epidemiological methods.

In Denmark, Norway and Sweden which have had 20 years of uninterrupted vaccination against TB, the disease in 1944 was killing people at the rate of 70 per 100,000 population, according to a Norwegian report. The same year it killed only 41 out of every 100,000 population in the United States, where some of the greatest centers of congested population in the world exist, and where millions of Negroes, Mexicans and others with high tuberculosis mortality live.

Science News Letter, October 11, 1947

MEDICINE

Old as Well as Young Helped by Cancer Surgery

➤ OLD people with cancer can be helped by surgical operations as well as young people. Their age is not a bar to good surgery, Dr. J. J. Morton of the University of Rochester, N. Y., School of Medicine declared at the International Cancer Congress.

Growth processes in old people are slowed and so the cancer also is slowed in its growth, Dr. Morton pointed out. This means that it may not take as radical and big an operation to remove a cancer in an old person as it does in a young one.

Dr. Morton told the story of an 80-year-old carpenter to illustrate his point. The carpenter had a big cancer in his stomach at the end where the intestines join the stomach. The carpenter's doctor took a hopeless view, saying "he's too old for an operation and the cancer is too big to remove."

But Dr. Morton was hopeful. He operated on the man, removing all the stomach except a small piece at the top. He also removed a big piece of the intestine that was involved in the cancer, and joined the remaining stomach to the remaining intestine.

Two weeks later this 80-year-old carpenter was out of the hospital, and he has been back at work and well for the past year since the operation.

Dr. Morton operates on 70- and 80-year-olds all the time. So do other good surgeons. The surgery must be delicate and the patient must not be allowed to bleed much. But the patient's age is no barrier.

Science News Letter, October 11, 1947