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[Disease Control] Taiwan Tries to Develop New TB Vaccine

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The Liberty Times (2011/12/28) In response to the increasing number of the tuberculosis ( TB ) patients aged 30 and under in Taiwan that has been suspected to be caused by the change of the type distribution of the infectious bacteria, for instance, the emerging modern Beijing familystrain that has stronger pathogenicity while less reactiveness to the traditional vaccine, is suspected to be the main cause of the increasing number, National Institute of Infectious Diseases and Vaccinology (NIIDV) plans to develop new Bacillus Calmette-Guerin (BCG). NIIDV expects its animal experiment could be in practice by 2015.

BCG is always inoculated within a week after the birth, but it is no longer regarded to be the TB vaccine since its effect is not so obvious regarding TB prevention, Centers for Disease Control (CDC) Deputy Director Chih-hao CHOU said. However, due to its effect on the prevention of Tuberculous meningitis under the age of 5, the inoculation will still be practiced.

Regarding NIIDV's plan to develop new TB vaccine, CHOU added, the development of TB vaccine is still a difficulty and not enough breakthroughs even at the international level have been seen.

Ih-jen SU, Head of the National Institute of Infectious Diseases and Vaccinology, pointed out that actually the total number of TB infected patients does not increase, but the proportion of the young infected especially of the modern Beijing familystrain emerges conspicuously. He continued, the modern strain of the TB Beijing genotype is a drug resistance bacterium with a strong toxicity, and it is believed to become a big threat to the TB control in the future.

SU thought, among the popular TB familystrains, including traditional Beijing familystrain, modern Beijing familystrain, Holland familystrain, etc., the traditional BCG is weak in preventing modern Beijing familystrain, and this may be the main reason of the increasing proportion of the young infected patients of modern Beijing familystrain. NIIDV will conduct animal experiments proving this hypothesis.

SU said, new vaccine will use the traditional BCG as basic model and embed two TB bacillus genes and one cellular immunity enhancement gene to enhance the effect of TB prevention.

Reference:
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