HOKKAIDO UNIVERSITY

Title	Abstracts of “Tuberculosis Research” Vol. 14, 1960
Description	
Citation	結核の研究, 14, 57-59
Issue Date	1961-03
Doc URL	https://hdl.handle.net/2115/26715
Type	departmental bulletin paper
File Information	14_P57-59.pdf

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Abstracts of "Tuberculosis Research"

Vol. 14, 1960

Clinical Study of the Kaolin Agglutination Reaction by the Phosphatide of the Tubercle Bacillus

Kei ADACHI

The phosphatide kaolin-agglutination reaction was tested periodically for one year in about 700 patients with pulmonary tuberculosis and tuberculin-positive healthy persons. The results led to the following conclusions:

1. The phosphatide kaolin-agglutination test reflects faithfully the degree of activity of pulmonary tuberculosis.
2. It has therefore a high reliability as a serodiagnostic tool for the activity of pulmonary tuberculosis.
3. It has also a possibility of being used for differentiating non-tuberculous pulmonary diseases from pulmonary tuberculosis.

Study on the C-reactive Protein Test in Human Pulmonary Tuberculosis (II)

Katsumi AWA

The C-reactive protein test was tested in 36 patients with pulmonary tuberculosis who were undergoing primary chemotherapy and in other 36 patients at their pre- and post-operatory stages. The results were as the following:

In the patients with chemotherapy:

1. The reaction disappears with clinical ameriolation of pulmonary symptoms, almost in one to two months after the beginning of chemotherapy.
2. The reaction runs almost parallel with blood sedimentations, X-ray findings, bacterial tests of sputa and other clinical symptoms.
3. The reaction remains positive in patients with active tuberculosis and inflammatory complications.

In the patients with surgical treatments:

1. The reaction turns out positive after about 10 days after operation and it gradually becomes negative. The reaction remains positive in unsuccessful cases and in cases with complications.
2. The negative conversion of the reaction retards with the importance of surgical stresses.
3. For the appreciation of surgical effects, the C-reactive protein test is superior to the blood sedimentiaton test.

Bacteriological Testing of Excrements after Bronchography as a Measure for Diagnosing Cure from Pulmonaly Tuberculosis

Kei ADACHI and Hiroshi NISHIMURA

In 120 patients with pulmonary tuberculosis who were sputum-negative for more than 3 months, excrements after bronchography (Urocholin) were cultured on Ogawa's egg media for consecutive 7 days after bronchography. Twenty-six percent of them (32 cases) were found sputum-positive. Eight out of 73 patients (11%) who showed tomographically no cavity converted positive, while out of 33 patients who had tomographically empty cavities after bronchography, 17 cases did so (51%), of which 5 cases had tuberculomata. The positive conversion of tubercle bacilli was found highest for excrements taken on the third day after bronchography.

Immunological Study of Sera of Tuberculous Animals (VI) Localization of anti-tuberculin antibodies in sera of tuberculous rabbits

Kazuo MORIKAWA and Harue OKUYAMA

Using the technic of continuous paper electrophoresis, the localization of various antituberculin antibodies in sera of tuberculous rabbits was studied. The serum protein fractions obtained by the technique were identified by paper electrophoresis in the usual manner.

The serum precipitating antibody to tuberculoprotein was found in the slow moving γ-globulin fraction, while the skin-sensitizing antibody in the fast moving γ-globulin fraction. However, the Middlebrook-Dubos' antibody and the hemolytic antibody (Middlebrook) to tuberculin polysaccharide and the Boyden's antibody to tuberculoprotein were found in the whole γ-globulin fraction and the titers of these antibodies corresponded to the concentration of γ-globulin. These results coincide with those obtained by the starch electrophoretic technique, which were described in the preceeding paper.

That the precipitating antibody was found to be electrophoretically different from the skin-sensitizing antibody would make comprehensible the relationship between the quantity of the precipitin antibody and the intensity of the skin reaction in desensitized animals.

A Clinico-pathological Study on Tuberculin Allergy by the Use of the Glass Capillary Culture Method

with special reference to the interrelations between tuberculin sensitivity, clinical findings and tuberculin cell reaction, as observed in patients with pulmonary tuberculosis.

Toshio MATSUDA

Forty patients with pulmonary tuberculosis who were expected to undergo pulmonary resection were tested of tuberculin sensitivity of their blood leukocytes. Tuberculin sensitivity was measured by checking the distance of migration of the leukocytes in the glass capillary tubes filled with culture medium and tuberculin. The relation between this sensitivity, clinical findings of tuberculin skin reactions were also studied. The results obtained were as follows:

1) Tuberculin sensitivity was higher in young groups than in old ones.

2) Leukocyte sensitivity was weak in patients with a long clinical history, but it was high in patients who had received a long-dated treament.

3) Leukocyte sensitivity was comparatively high in patients with severe disease.

4) Leukocyte sensitivity decreased remarkably 10 days after pulmonary resection, to increase slightly afterwards, being always lower than in the pre-opration period.

5) Leukocyte sensitivity was parallel with micro- and macroscopic findings of tuberculin skin reactions.

6) Histological findings of human tuberculin skin reactions were identical to those in animals already known.

7) The immediate type of tuberculin reaction was observed in a few cases, in which tuberculin sensitivity was observed especially increased.

On the basis of the above results, the characteristics of tuberculin allergy were discussed.