

### Résumé

## STUDIES OF THERAPEUTIC EFFECT OF COMBINED TREATMENT OF PENICILLIN AND STREPTOMYCIN TO EXPERIMENTAL BACTERIAL ENDOCARDITIS

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It is recommended to use combined treatment of penicillin (Pc) and streptomycin (SM) to bacterial endocarditis caused by *Streptococcus sanguis*, a subtype of *Streptococcus viridans*. In the experiment, it was also proved that the same combined therapy was the most suitable method of treatment to the experimental bacterial endocarditis. Rabbits were used as experimental animals, and phosphatide method as a method of producing endocarditis. Four different types of treatments were tried; 1) 100,000 units of Pc with 125 mg of SM, 2) 100,000 u of Pc with 250 mg of SM, 3) 300,000 u of Pc and 4) 100 mg of SM, each as daily doses. Duration of treatment was 10 days in each method. The result confirmed that combined treatment groups were more effective than single use groups.

|                 | Positive culture from organs % | Mortality rate % | Average survival days |
|-----------------|--------------------------------|------------------|-----------------------|
| 1) Pc+SM 125 mg | 24                             | 20               | 27                    |
| 2) Pc+SM 250 mg | 0                              | 0                | 30                    |
| 3) Pc 300,000 u | 38                             | 62               | 22                    |
| 4) SM 100 mg    | 85                             | 75               | 22                    |

As shown in Table, indicated in per cent of positive culture from organ, mortality rate and average survival days, combined treatment showed definitely better results compared with single use groups. Method 2) showed the best result; 0% of

mortality rate and per cent of positive culture from organs. Histological findings of verruca corresponded to clinical course; healing processes were observed in effective and relatively effective cases, and inflammatory findings obvious in cases without any effect.

From the above experiments, combined therapy of Pc and SM to experimental bacterial endocarditis produced by *Streptococcus sanguis* should be continued more than ten days with daily doses of larger than 100,000 units of Pc and 125 mg of SM.

The combined therapy was ineffective to cases of which verruca was bigger than bean size.

## THE QUANTITATIVE ANALYSIS OF THE DRUG RESISTANCE OF MYCOBACTERIUM TUBERCULOSIS IN PATIENTS. REPORT VII.

Relationship between the Occurrence of Mutants Resistant to 0.1 mcg of Isoniazid and the Chemotherapeutic Effect with Isoniazid-PAS in Combination.

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Quantitative analysis of the population structure of tubercle bacilli occurring in patients was performed in respect to isoniazid-resistance as well as to PAS-resistance on twenty-one cases having far-advanced pulmonary tuberculosis, and the results were compared with the chemotherapeutic effect of the combined chemotherapy with isoniazid and PAS in combination.

None of improvement has been observed in patients having tubercle bacilli resistant to 1 mcg of PAS as well as to above 0.1 mcg of isoniazid. It should be emphasized that the occurrence of tubercle bacilli resistant to 0.1 mcg of isoniazid and not resistant to 1 mcg of isoniazid has caused decrease of clinical effect of such chemotherapy.