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DYNAMICS OF BETA-LIPOPROTEINS OF THE
BLOOD SERUM IN PATIENTS WITH ACUTE
AND CHRONIC PNEUMONIA

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**DYNAMICS OF β -LIPOPROTEINS OF THE
BLOOD SERUM IN PATIENTS WITH ACUTE
AND CHRONIC PNEUMONIA**

M. M. Kasaurov

(Scientific Supervision by Doctor
of Medical Sciences A. N. Klimov,
Senior Scientific Colleague
A. M. Margolin)

The study of biochemical alterations in patients with inflammatory processes in the lungs is of practical significance for evaluating the dynamics of the disease.

Considerations of the state of lipoprotein fraction of the blood serum during chronic and acute pneumonia are inadequate and contradictory in the literature. In the literature available to us we did not encounter any works concerned with the dynamics of the concentration of β -lipoproteins of the blood serum during inflammatory diseases of the lungs.

The content of β -lipoproteins of the blood serum was determined by the turbidimetric method per Burshteyn and Samil as modified according to the proposal of the Laboratory of the Biochemistry of Lipoid Metabolism, IEM, AMN SSSR [CCCP - Institute of Experimental Medicine, Academy of Medical Sciences of the USSR].

We studied the blood-serum content of β -lipoproteins in 25 healthy individuals and 113 patients with acute and chronic pneumonia. Five hundred and twenty studies were made, with no less than 3 determinations for each patient.

The content of β -lipoproteins in the blood serums, protein fractions, the quantity of leukocytes, the erythrocyte sedimentation reaction, the quantity of cholesterol and bilirubin, and the prothrombin index were studied in parallel with clinical observations and X-ray studies of the lungs.

Analysis of the obtained results makes it possible to draw the following conclusions:

1. In the 25 healthy individuals, 18-55 years of age, the blood-serum content of β -lipoproteins falls within the limits 400-600 mg %.
2. A single application of antibiotics (penicillin, streptomycin, monomycin, tetracycline, oleandomycin, erythromycin) to healthy individuals and to patients with acute and chronic pneumonia, in various doses, does not have any essential influence on the level of β -lipoproteins in the blood serum. The variations in β -lipoproteins which are noted are analogous to the variations in the control studies.
3. During acute pneumonia oscillations in the level of β -lipoproteins are found; these are normalized with recovery.
4. In the majority of patients demonstrating exacerbation of chronic pneumonia, a high level of β -lipoproteins is observed; in the course of liquidation of the aggravations the level of β -lipoproteins is reduced, but it frequently does not return to normal.
5. During cachexia the blood-serum level of β -lipoproteins drops below normal; in individual cases it can drop to extremely low values.