

## 16. THE ROLE OF SYSTEMATIC SCREENING IN THE DETECTION OF PULMONARY TUBERCULOSIS IN DIABETIC PATIENTS



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**Introduction.** The burden of diabetes mellitus (DM) is increasing globally. The association between DM and tuberculosis (TB) is the next challenge for TB control worldwide. DM and TB represent a mutually disadvantageous disease association. The risk of TB disease is twofold to threefold as common in diabetics as in non-diabetics. Prevention, screening and treatment of both diseases together is more effective.

**Aim of study.** Studying the role of systematic screening for pulmonary TB detection in diabetics patients.

**Methods and materials.** In the study were included 68 patients with association of DM and pulmonary TB, new cases, admitted in the Municipal Clinical Phthisiopneumology Hospital, Chisinau, in 2022. The patients were divided into 2 groups: the study group – 30 patients, identified by systematic screening or active case finding (ACF), the control group – 38 patients, detected by passive case finding (PCF) by examination of symptomatic persons. Analysis methods: comparison, synthesis, Fisher's exact test.

**Results.** Men predominated in the both groups, the M/F ratio among patients detected by ACF was 1.5:1 and by PCF – 4.4:1, ( $p < 0.05$ ). The most of the study patients were over 55 years old. Almost half (13 (43%) cases) of the patients from study group had no identified contact with TB patient, in the control group the TB contact was identified in 36 (94,7%) of cases, ( $p < 0.05$ ). In diabetics identified with TB by PCF the predominance of bilateral pulmonary TB (31 (81.6%) cases), in the phase of destruction (29 (76%) cases), with dissemination (13 (34%) cases) was established. Comparison with patients diagnosed by ACF it was established lower rate of bilateral lung damage (14 (46.7%) case), ( $p < 0.05$ ), with destruction (17 (56,7%) cases), ( $p < 0.05$ ) and dissemination – 8 (26.7%) cases. The rate of TB diagnosis confirmed by microbiological or molecular-biological tests was higher in the control group, 26 (68.4%) patients, compared with study group, 10 (33%) patients, ( $p < 0.05$ ). TB treatment success rate in diabetics identified by ACF was higher, 24 (80%) cases compared with diabetics detected by PCF, 22 (57.9%) cases, ( $p < 0.05$ ).

**Conclusion.** The role of systematic screening for identification of pulmonary tuberculosis in patients with diabetes mellitus is obvious. The positive impact of systematic screening on the treatment success rate is explained by prompt detection of pulmonary tuberculosis in diabetics in the early stages with unilateral damage of the lung parenchyma without the destruction and dissemination.

**Keywords.** Tuberculosis, diabetes mellitus, systematic screening, symptomatic screening.