

**МІНІСТЕРСТВО ОХОРОНИ ЗДОРОВ'Я УКРАЇНИ
БУКОВИНСЬКИЙ ДЕРЖАВНИЙ МЕДИЧНИЙ УНІВЕРСИТЕТ
ДЕПАРТАМЕНТ ОХОРОНИ ЗДОРОВ'Я ЧЕРНІВЕЦЬКОЇ ОБЛАСНОЇ ДЕРЖАВНОЇ
АДМІНІСТРАЦІЇ
ГРОМАДСЬКА ОРГАНІЗАЦІЯ «АСОЦІАЦІЯ ТЕРАПЕВТІВ БУКОВИНИ»**



Науково-практична конференція з міжнародною участю

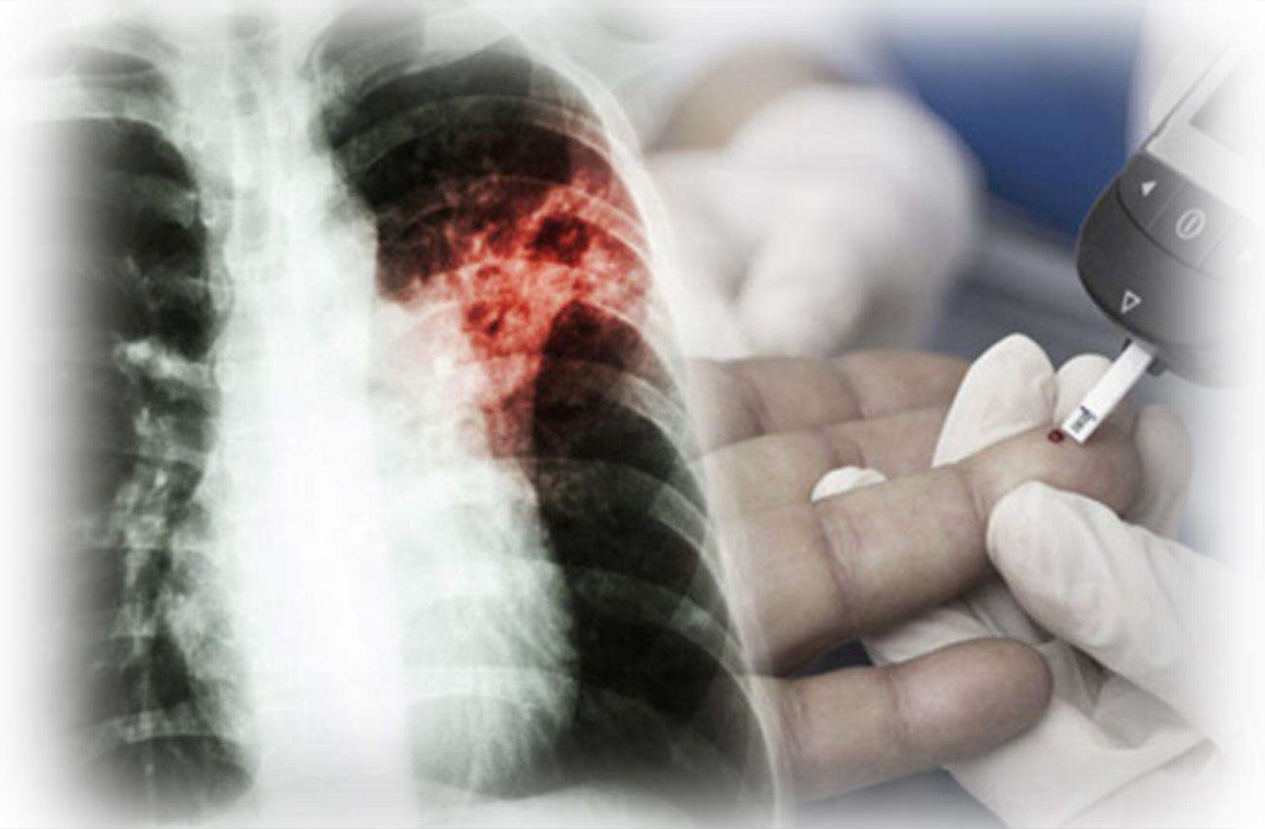
**«АКТУАЛЬНІ ПРОБЛЕМИ КОМОРБІДНОСТІ У
КЛІНІЦІ ВНУТРІШНЬОЇ МЕДИЦИНИ»**

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м. Чернівці

Efficacy of treatment in patients with TB and concomitant diabetes mellitus



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According to WHO, almost 592 million people will be living with diabetes mellitus (DM) by the year 2035. Taking into account that 11 million people got sick on TB every year in the world, combined TB / DM disease threatens to turn into a global public health problem.



Syal K, Srinivasan A, Banerjee D. VDR, RXR, coronin-1 and interferon γ levels in PBMCs of type-2 diabetes patients: Molecular link between diabetes and tuberculosis. Ind J ClinBiochem. 2018;30(3):323-8.



Objectives of the study is a comprehensive retrospective assessment of the prevalence, features, course of treatment of multidrug-resistant tuberculosis diabetes mellitus among patients in some regions of Ukraine (Chernivtsi, Kharkiv, Ternopil) and Grodno region of the Republic of Belarus.

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МЕДИЧНА КАРТА СТАЦІОНАРНОГО ХВОРОГО № _____

Після заповнення та підтвердження копією (звичайної адреси) викладу електронної копії, де зазначенося форма

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Підписання клінічної або патологічної проформи (заповнюється лікарем, протерапевтом або іншим спеціалістом): _____

1. Прізвище, ім'я, по батькові повністю: _____

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5. Мале робоче, спеціальність або посада: _____

6. Клас інфекційної спадковості: _____

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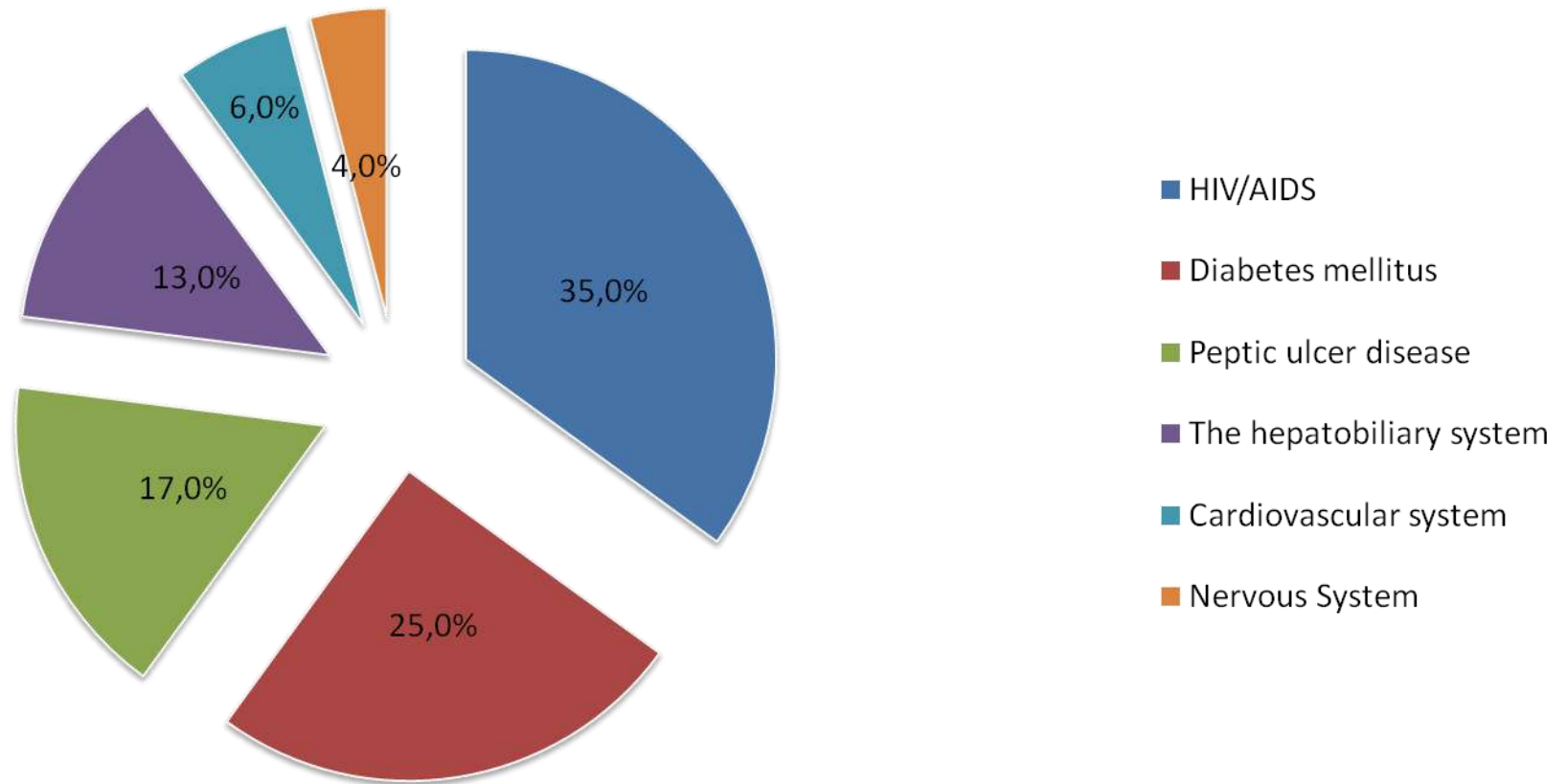
12. Дані про інші захворювання: _____

Код за МКХ-10: _____

Our study is based on an analysis of statistical data obtained from a retrospective study of 762 case histories and cases of MDR-TB in the register of tuberculosis patients in Chernivtsi, Kharkiv, Ternopil regions of Ukraine and Grodno region of the Republic of Belarus for 2015-2019. After a retrospective analysis all the patients were diagnosed with a case of multidrug-resistant tuberculosis. We distinguished two groups: the 1st group consisted of 88 patients with MRD-TB with concomitant comorbidity of diabetes; the 2nd group consisted of 674 patients diagnosed with MRD-TB without concomitant diabetes mellitus. The types of patients in both groups were representative by age and sex.

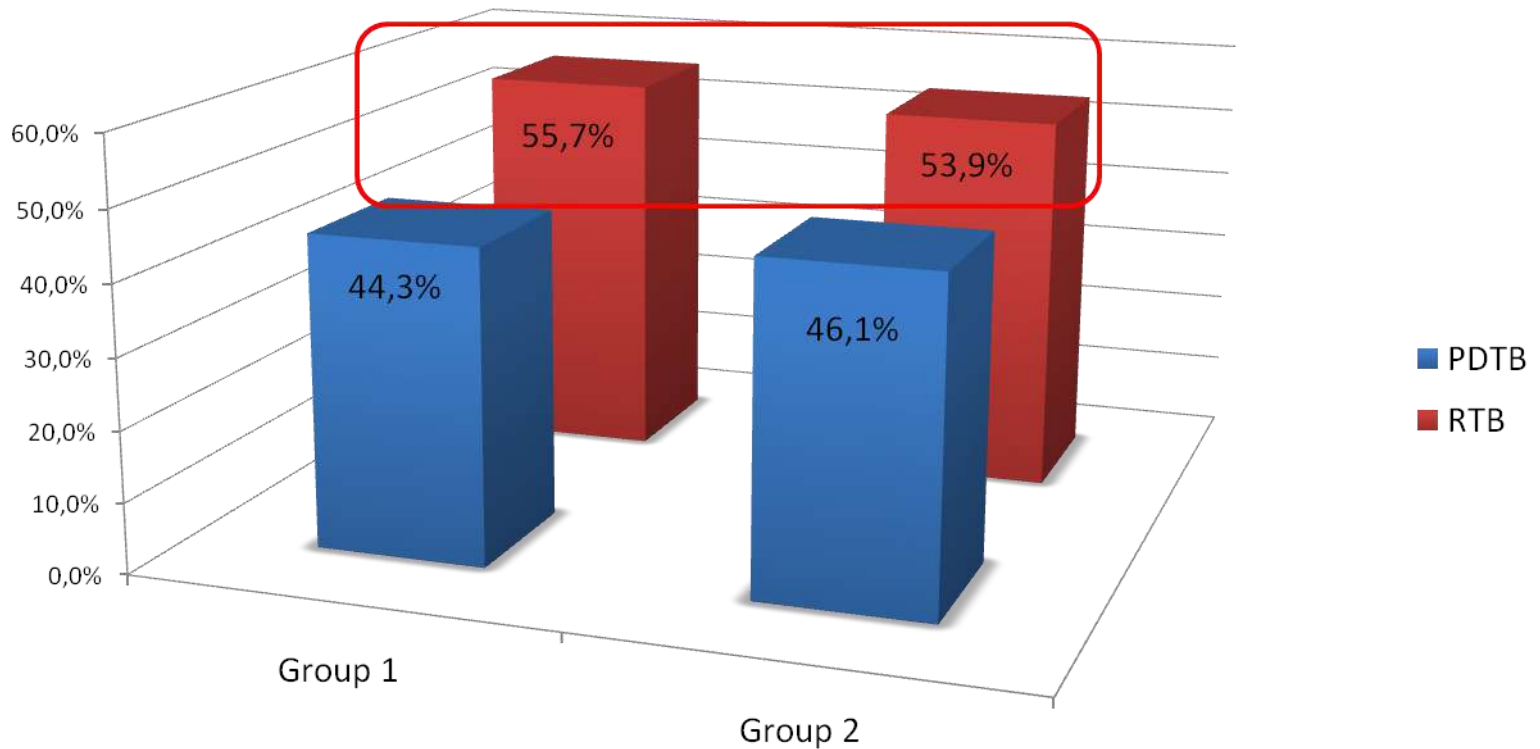
The work was performed according to the requirements for researches with the participation of people: Statute of the Ukrainian Association for Bioethics and the GCP norms (1992), requirements and norms of ICH GLP (2002), typical ethics provisions of the Ministry of Public Health of Ukraine 66 dated February 13, 2006.

The structure of concomitant pathology in patients with multidrug-resistant tuberculosis



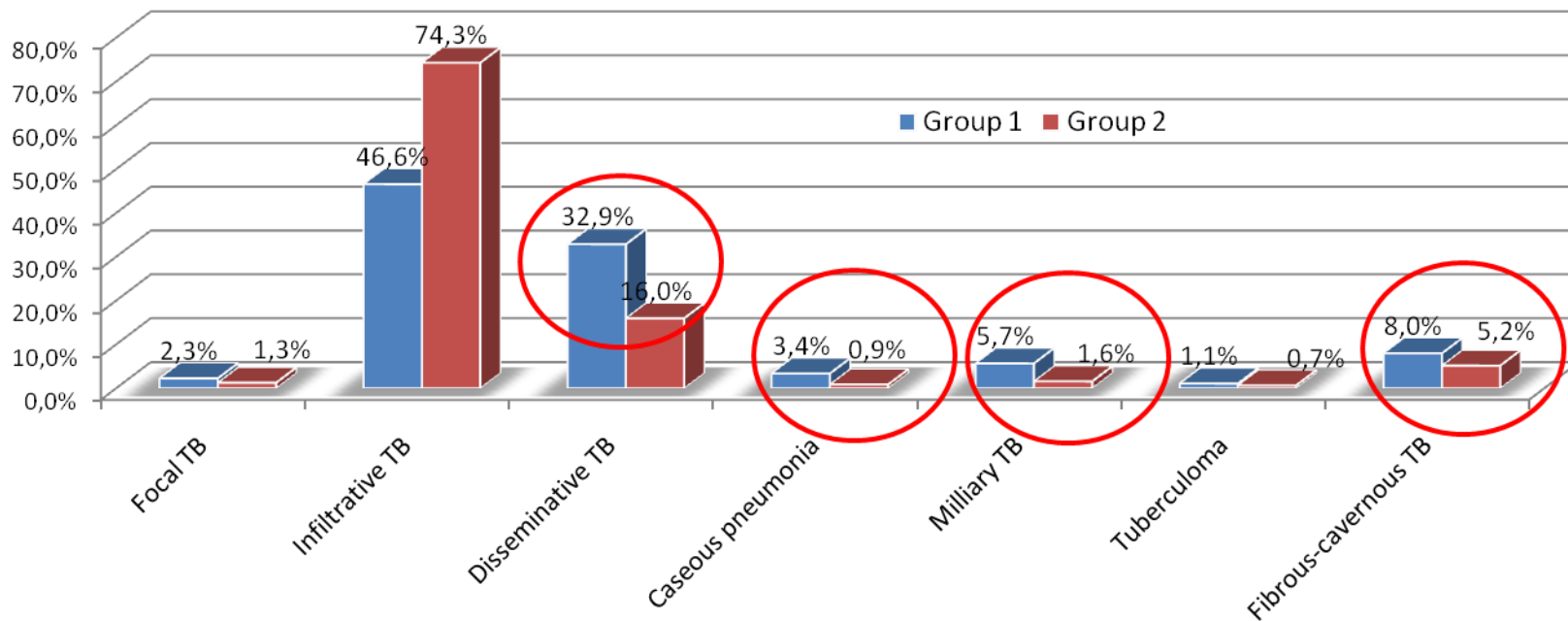
The analysis of the statistical material shows that over the past 15-20 years there has been a continuous progressive increase in the proportion of combined pathology and multidrug-resistant tuberculosis in the structure of tuberculosis. In the most of cases Tuberculosis is often combined with HIV / AIDS in 35% of cases, followed by diabetes mellitus in 25% of cases, peptic ulcer disease in 17% of patients with tuberculosis, hepatobiliary diseases in 13%, cardiovascular and nervous system pathology. in 6 and 4% respectively.

Type of MDR-TB case



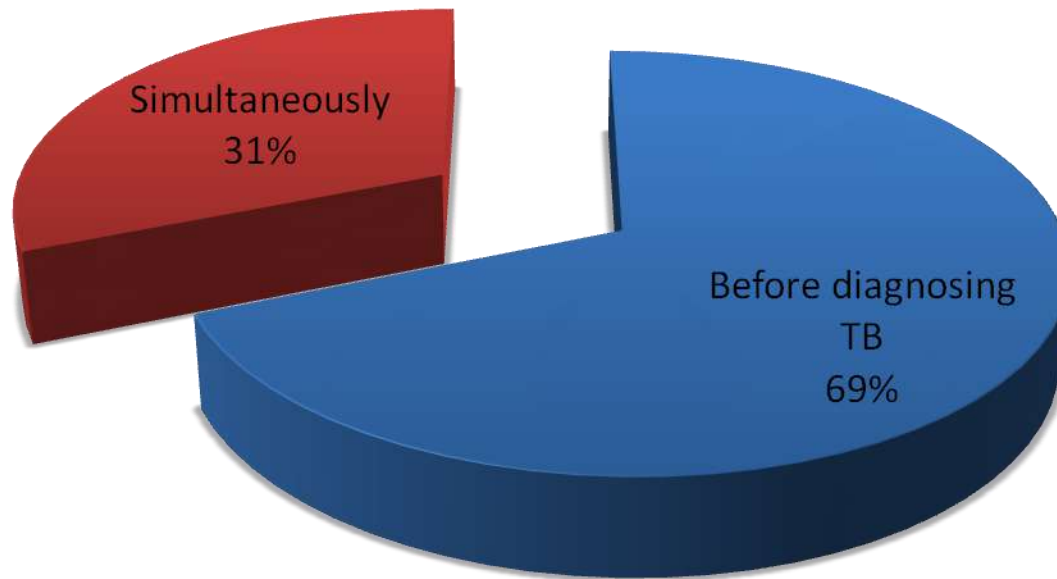
Depending on the type of TB case in our patients, we found that in both groups of the study the recurrence of TB prevailed – 49 cases (55.7%) against TB 39 cases (44.3%) of people in the main group; 363 cases (53.9%) against 311 (46.1%) in the control group ($p < 0.05$)

Radiological characteristics of the tuberculous process in the case of diabetes mellitus / MDR-TB



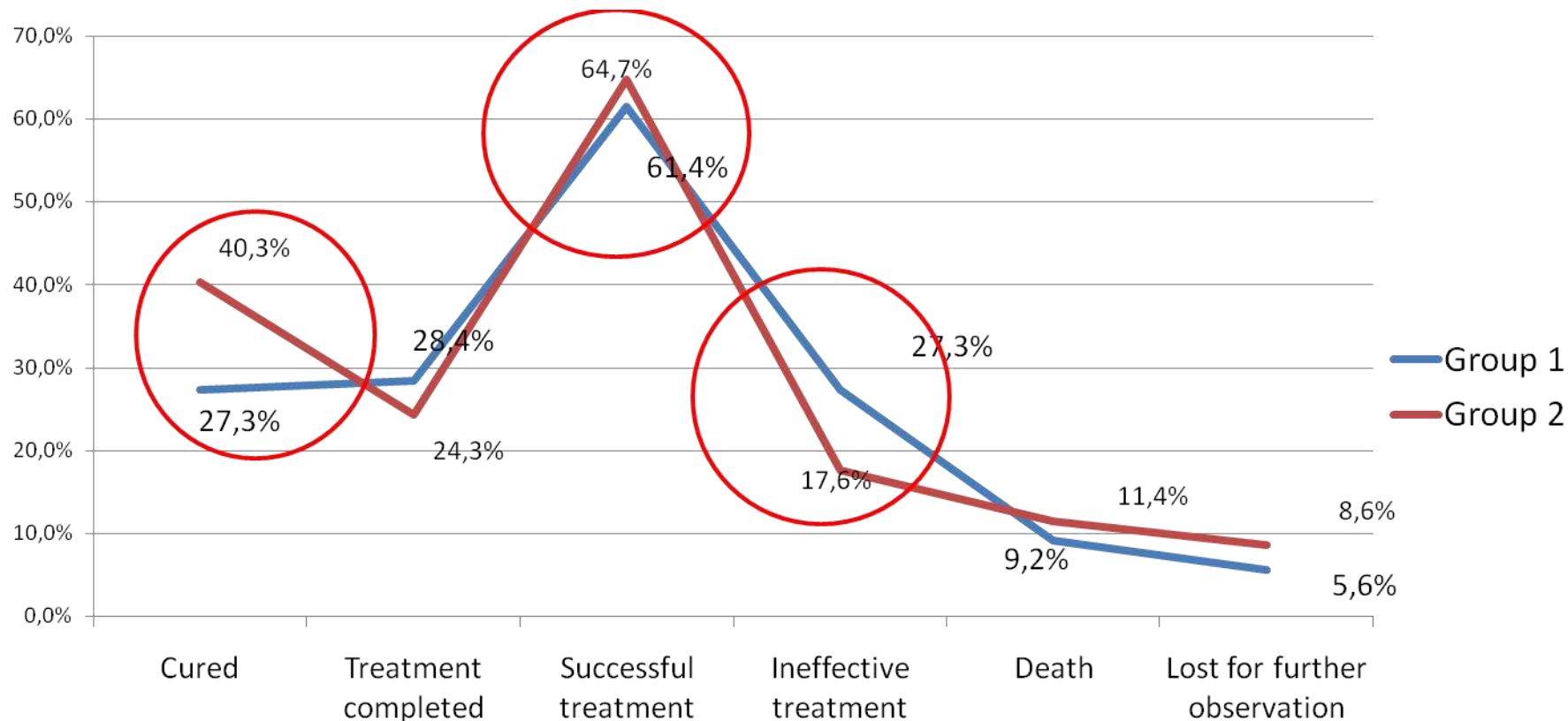
This Figure is shown that at patients of the 1st group heavy, widespread processes were probably more often registered in the lungs compared with the control, so disseminated TB 2 times more often than in group 2, cases of pneumonia – 3 times, miliary TB – 4 times and fibro-cavernous – 2 times more often. The obtained data indicate a more massive lesion of lung tissue in patients with concomitant pathology of diabetes. Another indisputable proof of this is that the prevalence of tuberculosis in 3 or more segments was observed in 72.7% of patients in the main group against 51.9% in the control group. Also, in the main group, the bacterial excretion index was registered in all 100% of patients against 93.9% in group 2 .

Diagnosis of diabetes in patients with MDR-TB



The retrospective analysis showed that in the patients included in the study, diabetes mellitus was detected in 28 cases (31.2%) simultaneously with the pulmonary tuberculosis; in 60 cases (68.8%) diabetes mellitus developed before tuberculosis and was the background for the manifestation of tuberculosis infection, with the average duration of the disease was 6.4 ± 1.2 years

The results of treatment in both groups of the study



Analysis of the treatment success rate of TB/diabetes comorbidity with drug-susceptible TB demonstrated a low percent of effectiveness – 54%, (compared to the general 76.77% in this group in whole Ukraine), a high mortality rate – 11%, which is also significantly higher than among people with drug-susceptible TB in Ukraine on average.

CONCLUSIONS

There is a clear tendency to increase the combined pathology and chemoresistance in the structure of the incidence of tuberculosis, the proportion of recurrences of tuberculosis in the presence of diabetes mellitus.

The pulmonary tuberculosis developed significantly more often in middle-aged patients ($p < 0.05$) with type 2 diabetes mellitus with moderate and severe states, the subcompensated form, with a complicated course. In patients with diabetes more often was registered a common tuberculous process in the lungs (79.5% of patients) and in all 100% of patients with syntropy bacterial excretion was registered.

The rate of successful treatment for the presence of MDR-TB / diabetes syntropy is probably lower in the main group (61.4% vs. 64.7%; ($p < 0.05$)). However, a more significant probable difference is characterized by the treatment rate, which in the main group is 27.3% versus 40.3% in the control group (almost 2 times; $p < 0.05$). The rate of ineffective treatment in patients with comorbidity was 27.3% (almost every third patient) against 17.6% in group 2.