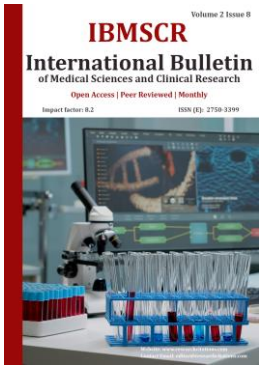

SURGERY FOR DRUG-RESISTANT TUBERCULOSIS

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Abstract. The purpose of the study is to study some of the problematic issues of MDR-TB surgery. An analysis was made of 720 cases of DR/MDR tuberculosis (TB) over a 5-year period (2018–2022), of which 141 (19.6%) patients were operated on for respiratory TB. Results and its discussion. Among all operated patients, newly diagnosed cases of TB prevailed (n=86; 75.4%), persons with MDR (n=66; 57.9%); surgical treatment was more often performed for tuberculomas (n=88; 73.7%) and fibrous-cavernous TB (n=19; 16.7%). The proportion of surgical closure of decay cavities averaged 24.8% over 5 years.
Keywords: tuberculosis, MDR, method, surgical treatment of tuberculosis.

INTRODUCTION

Surgical treatment is one of the important auxiliary methods of tuberculosis treatment, supplementing adequate antibiotic therapy.

The question of indications and contraindications for surgical treatment of drug-resistant/multidrug-resistant (DR/MDR) tuberculosis of Mycobacterium tuberculosis (MBT) is a difficult and debatable issue. The generally accepted indications for surgical treatment of tuberculosis are complications of tuberculosis (pneumothorax, pleural empyema, recurrent massive pulmonary bleeding in the absence of absolute contraindications to surgical intervention), tuberculomas of medium and large sizes, especially with decay, thick-walled cavities, and limited fibrous-cavernous tuberculosis (FCT) or FCT according to the type of a destroyed lung with a small lesion of the second lung [1,2,3].

MATERIALS AND METHODS

The issue of contraindications turns out to be more complex and ambiguous, and when discussing contraindications for surgical treatment of DR/MDR TB, there are different opinions in domestic phthisiosurgery.

Thus, some authors reasonably believe that the key to the effectiveness of combination therapy (ChT in combination with surgical methods) is the formed so-called “favorable preoperative background”. This term refers to a combination of several factors: positive clinical and radiological dynamics against the background of adequate chemotherapy (CT) of destructive tuberculosis with resorption of fresh focal-infiltrative changes and a decrease in perifocal inflammation around caverns or tuberculomas, cessation of bacterial excretion, preserved drug sensitivity MBT to at least 3-4 anti-tuberculosis drugs, as well as the most radical surgical treatment. For the formation of such a "favorable background" requires an average of about 6 months of adequate conservative therapy. At the same time, it is especially emphasized that resection surgery for MDR tuberculosis is futile in the absence of adequate chemotherapy with reserve drugs. Thus, persistent bacilli excretion against the background of chemotherapy, persistence of respiratory and general symptoms, the presence of infiltrative changes around caverns or tuberculomas, active tuberculosis of large bronchi, intolerance to

reserve drugs were regarded as a predictor of ineffective treatment: exacerbations and relapses of a specific process were observed in every second patient, lack of recovery — in 30.8% of patients.

We studied the case histories of 720 patients discharged from the department for the treatment of drug-resistant forms of tuberculosis over 5 years (2018–2022). Among 720 patients discharged, 141 (19.6%) were operated on for tuberculosis of the respiratory organs.

RESULTS AND DISCUSSION

The majority of all patients operated during the main course of treatment (MCT) (n=114) were newly diagnosed patients with tuberculosis (n=86; 75.4%), tuberculosis relapses were 7.9% (n=9), the proportion patients with chronic tuberculosis was 16.7% (n=19).

In 14 (51.9%) of 27 patients taken for the main course of treatment (MCT) with second-line drugs after surgical treatment, information on drug resistance was obtained from the surgical material, in 13 patients (48.1%) - from sputum taken for culture before surgery.

Models of drug resistance and treatment regimens for tuberculosis in patients operated on during MCT.

Tuberculomas (n=88; 73.7%) prevailed among the forms of tuberculosis for which surgical treatment was performed, fibrous-cavernous tuberculosis was in 19 patients (16.7%), cavernous tuberculosis was in 6 (5.3%) , limited pleural empyema was in one case (0.8%). The characteristics of surgical interventions for these forms of tuberculosis were as follows: resections were performed in 84 cases (73.6%), lobectomy - in 15 (13.2%), pulmonectomy - in 3 (11.4%), thoracoplasty - in 1 (0.87%) and pleurectomy in 1 (0.87%). Of the 84 lung resections, 11 were bilateral, 7 were combined. Among 15 patients who underwent lobectomy, bilobectomy occurred in two cases.

Among the patients treated by us for the period 2018-2022. (n=720) 94 patients had a recurrence of tuberculosis (group IB of dispensary registration); It should be noted that these patients accounted for 13.1% of all patients discharged from the department. 17 (18.1%) of these 94 patients were operated on earlier. Thus, almost every 5th patient with a recurrence of DR/MDR TB has undergone surgery for TB in the past.

In total, among those discharged for the period from 2018 to 2022, 36 patients were with progression or relapse of tuberculosis after surgery (IA and IB groups of DU). The timing of exacerbation or recurrence of tuberculosis after surgery was as follows: within the first year after surgery — in 16 patients (44.4%), within 1 to 2 years after surgery — in 8 (22.2%), from 2 to 3 years - in 4 patients (22.2%), after 3 years or more - in 8 patients (44.4%). The reason for the recurrence or progression of tuberculosis after surgery was probably that these patients had no information about drug resistance and its spectrum before surgical treatment (as a rule, due to the absence of bacilli shedding). Therefore, after surgery, these patients received inadequate therapy with first-line drugs. It should be noted that during the period of this analysis, the department had 7 patients with progression or recurrence of tuberculosis with DR/MDR MBT after surgical treatment, i.e. every 10th patient of the department. We also analyzed the causes of failures in the treatment of drug-resistant tuberculosis (n=8) with the use of reserve drugs in combination with surgery for the specified period.

The first and most banal reason was the interruption of chemotherapy. Thus, in patients who underwent pulmonectomy for MDR-TB with preserved sensitivity to reserve drugs and who stopped treatment ahead of schedule (n=2), a year later tuberculosis progressed in the only lung.

The second (and main) reason was the drug resistance model, i.e. the patient has such a spectrum of resistance to reserve drugs that did not allow choosing an adequate chemotherapy regimen. During the analyzed 5-year period, we observed 6 failures due to superresistant forms of tuberculosis in patients undergoing surgical treatment in combination with chemotherapy with reserve drugs. As a rule, in the cases described, "operations of desperation" took place; Thus, 5 out of 6 patients were bacillary at the time of surgery, i.e. they could not be abacillated by long-term conservative treatment. One patient was non-bacillary for 6 months before surgery, but she had a severe background pathology in the form of type I diabetes mellitus with a labile course.

CONCLUSION

1. Surgical treatment of tuberculosis with DR / MDR MBT without adequate chemotherapy is unable to cure tuberculosis; planned surgical interventions can only be an integral part of the complex treatment of tuberculosis with adequate chemotherapy.
2. Persistent shedding of bacilli during chemotherapy is a contraindication to the planned surgical treatment of DR/MDR tuberculosis, as it indicates the ineffectiveness of chemotherapy.
3. The presence of TB with MBT XDR (MDR + fluoroquinolone resistance + aminoglycoside/capreomycin resistance) can be regarded as a predictor of treatment failure.

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