



## Sanational Bronchoscopy of the Tracheobronchial Tree in Children

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**Abstract:** A clinical observation with a suspected foreign body of the tracheobronchial tree in 42 children aged from 1 to 8 years is presented. They underwent sanation bronchoscopy with suspicion of the presence of a foreign body in the tracheobronchial tree.

**Keywords:** bronchoscopy, foreign bodies, tracheobronchial tree.

**Relevance.** Despite the achievements of modern science in the field of medicine, the problem of foreign bodies (FBs) of the respiratory tract in children remains quite relevant, since FBs that enter the lumen of the trachea and bronchi pose a real danger to the patient's life [3,4,10]. Suspicion of the presence of a foreign body in the tracheobronchial tree is an indication for bronchoscopy [1,6,11]. Foreign bodies of the tracheobronchial tree (TBD) in children are quite common and are very diverse (from small fragments of food masses to large parts of toys, plastic and metal parts of household and other appliances) [5,7]. Often, foreign bodies of the trachea and large bronchi are an accidental finding during routine chest radiography [9,12]. The experience of an endoscopist and properly developed tactics will help to avoid complications when removing foreign bodies of the tracheobronchial tree [2,8].

Purpose of the study: to evaluate the results of therapeutic bronchoscopy in patients with foreign bodies of the trachea and large bronchi.

**Materials and methods:** The experience of the surgical department of the Bukhara Regional Multidisciplinary Children's Medical Center for the period from 2018 to 2022 was analyzed. with suspicion of a foreign body of the tracheobronchial tree, we examined 42 patients, the age of the patients varied from 1 to 8 years.

At the time of examination, only 35 patients (83.3%) complained. Most often, patients were disturbed by: cough, shortness of breath, soreness in the chest, fever, frequent colds. However, almost half of the patients - 19 (45%) had no complaints at the time of examination. Upon further review of the anamnesis, only half of all patients indicated a possible aspiration of a foreign body in the anamnesis.

All patients underwent standard chest x-ray prior to bronchoscopy. According to chest radiography, foreign bodies were detected in 12 patients (28.5%). In another 9 patients (21.4%), radiography revealed nonspecific (inflammatory) signs of a foreign body. The complete absence of radiological signs of a foreign body was noted in 23 patients (54.7%).

Fibrobronchoscopy was performed in all cases under general anesthesia using intravenous ketamine. In a number of patients, mainly with "old" foreign bodies, sanitation bronchoscopy was previously

required to reduce inflammatory changes around the foreign body and increase the lumen of the obstructed bronchus. For sanitation, a solution of sodium chloride 0.9% was used. As a rule, after two or three sessions of sanitation bronchoscopy, it was possible to completely remove the foreign body, but in some cases it took from 3 to 5 sessions of sanitation bronchoscopy. To remove foreign bodies of the tracheobronchial tree, broncho- and gastroscopic forceps and loops were used, as well as special instruments for removing foreign bodies (such as "rat tooth" and "alligator"). With the formation of granulation tissue around a foreign body, they were mechanically removed. After the removal of foreign bodies, all patients were shown mandatory rehabilitation bronchoscopy. In sick children, during bronchoscopy, a bronchoscope of flexible endoscopic equipment was used to remove a foreign body from the tracheobronchial tree.

**Results:** bronchoscopy revealed foreign bodies of the tracheobronchial tree in 35 patients (83%). Most often, foreign bodies were found in the right lower lobar bronchus - 22 patients (52%), and with large foreign bodies in the right main bronchus - 8 patients (19%). In 5 patients who did not complain at the time of examination, foreign bodies were found and removed from the lumen of the tracheobronchial tree.

**Conclusion:** as a rule, the erased clinical picture of the disease, and in some cases, the absence of complaints from the patient, does not allow a correct diagnosis. Bronchoscopy remains the main technique for removing foreign bodies of the trachea and large bronchi. The technique of removing "old" foreign bodies from the lumen of the triheobronchial tree requires a certain experience of the doctor, as it is fraught with perforation of the bronchus wall and bleeding. The recovery of the patient directly depends on the correct choice of tactics by the doctor.

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