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CLEARING THE TRACHEOBRONCHIAL TREE IN INTENSIVE CARE.

Abstract. Airway obstruction caused by sputum, blood or aspirated material requires a rapid and appropriate response. Bronchoscopy, both rigid and fibreoptic, has been and remains the most optimal method for resolving these conditions. Patients in intensive care units, particularly those on prolonged mechanical ventilation, require constant endoscopic monitoring.

Keywords: bronchoscopy, intensive care, debridement.

Introduction. A defining feature of the work in intensive care units within the emergency medical services (EMS) system is that, in the vast majority of cases, patients are admitted in a severely or critically ill condition.

Research methods. Endoscopic methods—in particular, fibre-optic bronchoscopy—play a significant role in the management of such patients.

Impaired drainage of the bronchial tree exacerbates, and in some cases directly triggers, the development of fatal complications; consequently, the widespread use of tracheobronchial fibroscopy (TBFS) is more than justified in the treatment of various categories of patients in intensive care units.

Study results. At the Andijan branch of the Republican Scientific Centre for Emergency Medical Care, 342 bronchoscopic examinations were carried out between 2022 and 2024, There were 246 male patients (77.6%) and 71 female patients (22.4%), with 254 (80.1%) being of working age.

Diagnostic bronchoscopic examinations were carried out in 116 (36.6%) cases, whilst therapeutic or rehabilitative bronchoscopic procedures were performed in 201 (63.4%) cases.

The frequency of bronchoscopies and the time interval between them were determined by the intensive care specialists based on the endoscopist’s findings,

the patient's general condition, and clinical and laboratory parameters, and ranged from daily to once during the entire period of the patient's stay in intensive care.

Of the 201 therapeutic bronchoscopies, 196 (97.5 per cent) were performed via the endotracheal tube or through a tracheostomy; the availability of an artificial route for bronchoscope insertion was of great importance in ensuring the timely performance of this treatment method. Transnasal or transoral methods of performing therapeutic bronchoscopy in critically ill patients, where the body's compensatory capacity is failing and the duration of the procedure is reduced to a minimum, require greater bronchoscopic expertise. In 5 (2.5%) cases, transnasal therapeutic bronchoscopies were performed.

In the vast majority of cases – 151 (75%) – sanation TBFS procedures were performed in the neuro-intensive care unit (NICU); in 32 (16%) cases, they were carried out in the anaesthesiology and intensive care unit (AICU), and in the cardiac intensive care unit (ICU 2) in 18 (9%) cases

Of the 151 TBFS procedures performed at the NRO, all were carried out on patients with various types of traumatic brain injury and strokes accompanied by respiratory complications arising from prolonged mechanical ventilation.

Of the 32 debridement TBFS procedures performed in Intensive Care Unit 1 (ICU), 24 (75 per cent) were performed on patients following abdominal surgery; in the vast majority of cases (19, or 79 per cent), the reason for the debridement was the presence of concomitant pneumonia, whilst in 5 (21 per cent) cases it was aspiration syndrome (Mendelson's syndrome) that had developed during the pre-operative phase. In 8 (25%) cases, debridement TBFS procedures were performed on patients following thoracic surgery; of these, 5 (62.5%) were intraoperative TBFS procedures, whilst the remaining 3 (37.5%) were also performed due to aspiration syndrome occurring in the pre-operative phase.

In the cardiac intensive care unit, 18 debridement TBFS procedures were carried out; of these, 13 (72.2 per cent) were performed on patients with pneumonia of various aetiologies, and 5 (27.8 per cent) on patients with thromboembolism of the medium and small branches of the pulmonary artery.

Conclusion. Thus, in the intensive care of various life-threatening conditions accompanied by respiratory failure, the timely and appropriate performance of therapeutic fibrobronchoscopies is of great importance.

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