Tracheal neoplasms are rare, accounting for 0.1-0.2% of all malignant neoplasms [I.I. Davydovskyi, 1940]. Data from the database of the National Cancer Institute for Surveillance, Epidemiology and End Results indicate that primary tracheal carcinomas occur with an incidence of 0.7% of new cases per million people [Houston, 1963]. Patients with tracheal tumors can have severe airway obstruction. In addition to primary tracheal neoplasms, secondary tracheal affection may occur due to lesion of surrounding tissues such as thyroid, larynx, and lungs - 15.3%.

The aim of the work was to study a clinical case of a tracheal tumor and its successful surgical treatment.

Clinical case. A 57-year-old patient sought medical advice, without a history of comorbidities, with complaints of significant shortness of breath at rest and while little physical exertion, shortness of breath and stridor, which appeared within a month and worsened over the last week. The patient has been smoking for 30 years. Upon examination, facial acrocyanosis and orthopnea are noted. Breathing is noisy, with wheezing, which can be heard from a distance. The respiratory rate is 26 breaths per minute at rest. Moderate arterial hypertension 150/90 mm Hg, tachycardia up to 100 beats/min. SpO2 = 92% when breathing in atmospheric air, without oxygen support. Other organs are within normal ranges. According to the computed tomography of the brain, chest, abdomen, focal cerebral pathology was not found. Moderate emphysematous changes in the lungs, without focal and infiltrative shadows. The neoplasm is localized in the upper third of trachea, with invasion to the right lobe of the thyroid gland. The lumen of both main bronchi is patent. There are enlarged paratracheal lymph nodes to the left. Other groups of mediastinal lymph nodes are of normal size. Great vessels without clear invasion. Abdominal organs without visible changes. Intra-abdominal lymph nodes are not enlarged. For the purpose of additional examination, the fibrobronchoscopy was performed, as a result of which in the upper third of the trachea to the right, 1.5 cm from the glottis was detected a tenuous lesion narrowing the lumen by 1/2. To determine the status of the cardiovascular system, the echocardiography was performed: right ventricle-2.4; pressure gradient (RV) – 40 mm Hg. Right atrium - not dilated, left atrium - 3.4; left ventricle: EDD - 4.3 cm; ESD - 2.9; LV - 0.8-0.9; EF -60%. The pericardium is somewhat dilated, in systole 0.5 cm, in diastole 0.2 cm, anterior 0.3 cm, near right atrium 0.4. Mitral valve - the anterior leaflet 0.4 cm prolapse. Type I diastolic myocardial dysfunction. Aortic valve - calcification (+). Conclusion: grade I mitral valve prolapse, with minimal insufficiency. Minor insufficiency of tricuspid valve, of aortic valve - minimal. Calcification of aortic valve. Grade I pulmonary hypertension. Minimal hydropericardium. Findings of complete blood count, urinalysis, biochemical parameters of blood serum and coagulogram - within normal range. The patient was diagnosed with T3 tracheal neoplasm (based on results of fibrobronchoscopy and CT). Threat of asphyxia. Considering the local prevalence of the tumor, potential resectability and the threat of asphyxia, the patient was scheduled for surgery - resection of the trachea with the right lobe of the thyroid gland and mediastinal lymphadenectomy. After obtaining the informed consent of the patient and short-term preparation (antibiotics, oxygen therapy), the patient was operated on.

Surgical tactics. After preparation of the operating field twice with a performic acid solution under endotracheal anesthesia (double-lumen ventilation), in the supine position, with a roller under the shoulder blades, a skin incision was made from the cricoid cartilage to the point of attachment of the 4th rib to the sternum along the midline. The anterior surface of the trachea was mobilized by blunt sharp dissection with the help of LigaSure. The isthmus of the thyroid gland was transected. Anterior sternotomy was performed at the level of the 2nd intercostal space. Longitudinal sternotomy. The anterior mediastinum was exposed. With the help of LigaSure, the trachea was mobilized from the cricoid cartilage on the left and back along the entire length, exposed from the left lobe of the thyroid gland. The right lobe grows into the tumor. Intersection of the trachea at the level of the 9th cartilage. Artificial ventilation through the operating field was performed. A tumor of the trachea was mobilized by blunt sharp dissection with the right lobe of the thyroid gland in one block proximally at the level of the 2nd cartilage. Separately, the paratracheal lymph node was removed to the left. Six interrupted sutures were placed on the anterior wall. Artificial ventilation through the anterior wall of the sternum, via tube, was performed. Interrupted sutures were placed on the anterior and lateral surfaces. Sutures were tightened with a bent head without tension. Metal osteosynthesis. Layer-by-layer wound closure. Drainage of the mediastinum. Drainage according to Bulau on the right. The stages of surgical intervention are shown in Fig. 1-5.

Features of anesthetic tactics. The operation was performed under endotracheal anesthesia, using muscle relaxants and artificial ventilation. Hypnotics in combination with opioids were used. Premedication was performed according to the generally accepted technique. Venipuncture in the right elbow bend. Monitoring. 15 minutes before the onset of anesthesia,
1000 mg of paracetamol was administered intravenously by drop drip.

For induction, sodium thiopental at a dose of 300 mg, nalbuphine 1 mg/kg, and atracurium 0.5 mg/kg were used. Lidocaine 1.5 mg/kg per 100 ml of physiological solution was connected by drop drip within 30 minutes after the onset of anesthesia. Tracheal intubation was performed, using double-lumen tube with a diameter of 6.0Fr and connected to the ventilator in CMV mode, with respiratory rate 22 breaths/min, tidal volume 4 l/min. SpO2 - 97-99%. The main anesthesia is Diprofol at a dose of 1.5 mg/kg/hour, with additional administration of 40 mg and 20 mg nalbuphine in 30 minutes. Maintenance of relaxation during the operation, non-depolarizing muscle relaxants at a dose of 0.6-0.7 mcg/kg every 15-35 hours. Pulse 74-88 beats per minute. Blood pressure 80/50 - 120/70 mm Hg. Intersection of the trachea at the level of the 9th cartilage. Ventilation through the oro-tracheal tube was stopped and ventilation was started through the second endotracheal tube passed through the operating field. Interrupted sutures were placed on the anterior wall. Ventilation through the orotracheal tube was restored. At the end of the operation, the patient was taken to the recovery room on prolonged mechanical ventilation, with sedation with dexmedetomidine at a dose of 0.5-1.2 mcg/kg/h. 24 hours after the operation, the patient is fully conscious, with restored muscle tone, tracheal extubation was performed. Self-sufficient breathing without oxygen support. The early postoperative period was uneventful. Stable hemodynamics, blood pressure 110/70 mm Hg, normocardia. On the 21st day, the patient was discharged in satisfactory condition.
Fig. 1,2,3,4. Stages of surgical intervention.

Fig. 5 Plastic surgery of the trachea.

Fig. 6 Gross tumor specimen.

Pathology conclusion. The gross tumor specimen is shown in Fig. 6. According to pathohistological study: moderately differentiated non-keratinizing squamous cell tracheal carcinoma.

Conclusions.
1. Tracheal neoplasms is a rare and life-threatening pathology with the rapid development of asphyxia and the need for aggressive treatment tactics.
2. The use of nalbuphine in the structure of the components of general anesthesia is an acceptable alternative to narcotic analgesics.

BIBLIOGRAPHY:


