

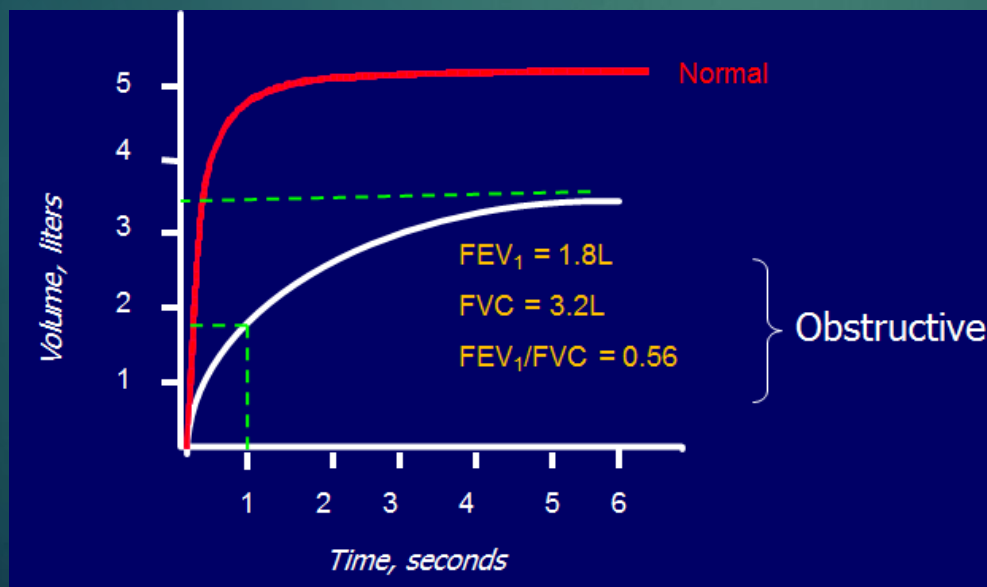
External respiratory function in a patient after removal of the middle and lower lobes of the right lung (pulmonary compensatory possibilities of ventilation lung function)

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INTRODUCTION:

Chronic Obstructive Pulmonary Disease (COPD) is a common, preventable and treatable disease that is characterized by persistent respiratory symptoms and airflow limitation that is due to airway and/or alveolar abnormalities usually caused by significant exposure to noxious particles or gases*. The chronic airflow limitation that is characteristic of COPD is caused by a mixture of small airways disease (e.g., obstructive bronchiolitis) and parenchymal destruction (emphysema), the relative contributions of which vary from person to person



2016

Combined Assessment of COPD

Patient	<u>Characteristic</u>	<u>Spirometric Classification</u>	Exacerbations per year	CAT	<u>mMRC</u>
A	Low <u>Risk</u> <u>Less</u> Symptoms	GOLD 1-2	≤ 1	< 10	0-1
B	Low <u>Risk</u> More Symptoms	GOLD 1-2	≤ 1	≥ 10	≥ 2
C	High <u>Risk</u> <u>Less</u> Symptoms	GOLD 3-4	≥ 2	< 10	0-1
D	High <u>Risk</u> More Symptoms	GOLD 3-4	≥ 2	≥ 10	≥ 2

Classification of Severity of Airflow Limitation in COPD

IN PATIENTS WITH $FEV_1/FVC < 0.70$:

GOLD 1: MILD $FEV_1 \geq 80\%$ PREDICTED

GOLD 2: MODERATE $50\% \leq FEV_1 < 80\%$ PREDICTED

GOLD 3: SEVERE $30\% \leq FEV_1 < 50\%$ PREDICTED

GOLD 4: VERY SEVERE $FEV_1 < 30\%$ PREDICTED

OUR PATIENT



PATIENT BOREC. T.V.

- 61 YEARS OLD
- ENGINEER
- CITY RESIDENT
- DATE OF ADMISSION: 07/12/2016

COMPLAINTS

- ❖ Recurrent dry cough
- ❖ Shortness of breath
- ❖ Headache
- ❖ Dizziness
- ❖ Fatigue
- ❖ Weakness, decreased resistance to physical stress

Anamnesis Morbi

- ▶ Patient notes recurrence of obstructive bronchitis since birth. At the age of 14 bronchoscopy was performed, year later - right-sided bilobectomy was held in connection with congenital bronchiectasis. Consequently, with a diagnosis of chronic bronchitis she was observed by the pulmonologist, during exacerbations – inpatient treatment at the hospital.
- ▶ The patient didn't follow prescribed treatment, used drugs irregularly.
- ▶ In December 2016, suffered a sore throat, running nose, cough and fever till 38,5 for 3 days. Further joined the above symptoms. She was admitted to day hospital of policlinic 24 for diagnosis : Chronic obstructive pulmonary disease (COPD). Chronic diffuse bronchitis in remission, condition after right-bilobektomia (1970) due to congenital bronchiectasis
- ▶ Patient received mucolytics (pectolvan C), antiviral drugs (amizon)


Anamnesis Vitae



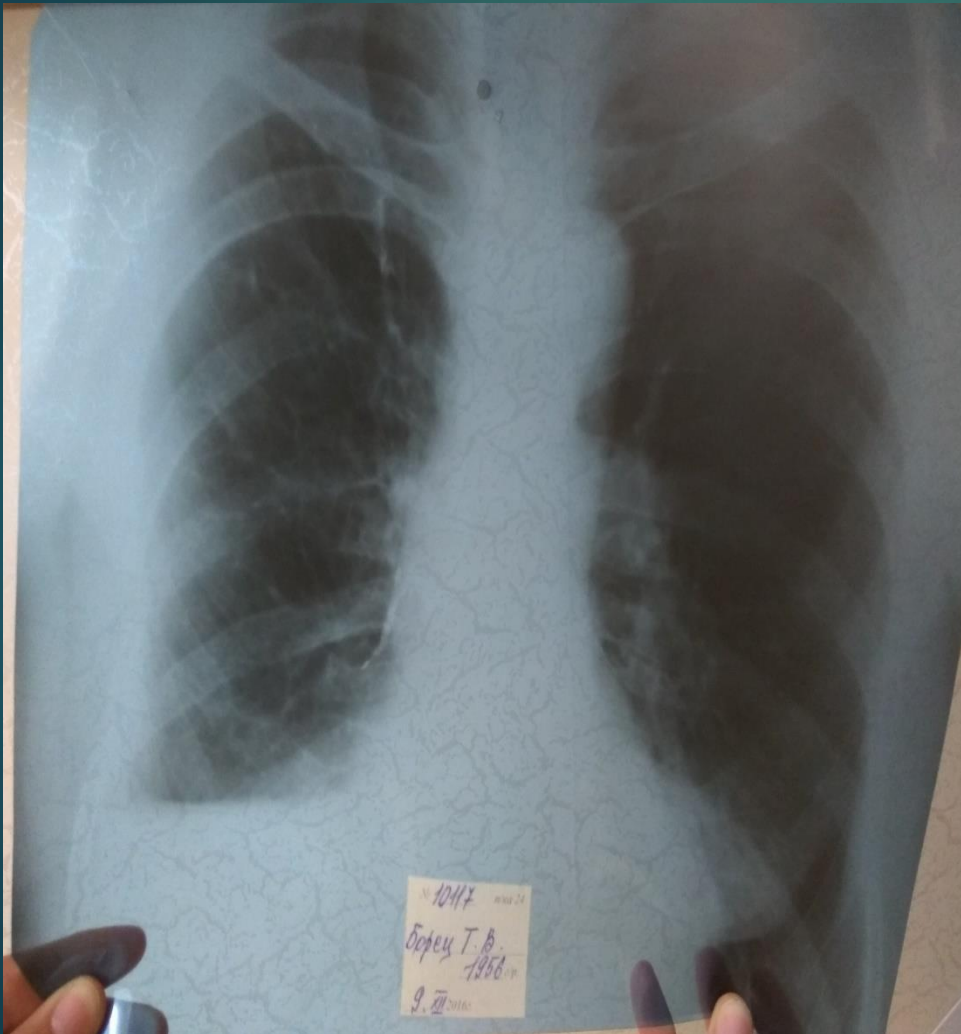
- ❖ Infections, injuries, tuberculosis, sexually transmitted diseases were denied.
- ❖ Hereditary diseases are not identified.
- ❖ Allergological history is not burdened.
- ❖ Smoking denies but her husband is smoker.
- ❖ Using chemical agents for cleaning house

OBJECTIVE STATUS

- - General condition- moderate, conciseness - clear, posture – active. Patient can orientate herself in place, time, personality.
 - Height – 168cm, weight – 57 kg, BMI – 20,28
 - - Skin and mucosae are pale, moist, clean.
 - - Thyroid: no pathological changes.
 - - Skeleto–muscular system - deformity of the chest after sternotomy.
 - - RR – 20 /min.
 - - Lung percussion: pulmonary below scapula angles from both sides
 - - Lung auscultation: decreased vesicular breathing, wheezing in inferior parts of both sides of lungs
 - - Borders of the heart: left border shifted to the left on 4 cm
- Heart auscultation: heart tones rhythmic, clear
- - Pulse – rhythmic, 65 bts/min
 - - BP 130 / 80 mm Hg.
 - - Abdomen: symmetric
 - - Liver: +2sm.
 - - Spleen: not palpable
 - - Edemas: absent.
 - - Varicose vein disease of lower extremities – absent.
- Pasternatskiy sign is negative on both sides. Urination is free, painless.

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- CLINICAL BLOOD TEST (CBT) AND URINE ANALYSIS - ALL PARAMETERS WITHIN THE NORMAL RANGE
 - **BIOCHEMICAL PANEL** - ALL PARAMETERS WITHIN THE NORMAL RANGE
 - LIPID PROFILE - ALL PARAMETERS WITHIN THE NORMAL RANGE
 - ELECTROCARDIOGRAPHY (ECG)- SINUS RHYTHM, SIGNS OF RIGHT VENTRICULAR HYPERTROPHY
 - ULTRASOUND-

X-Ray



Conclusion:

A diffuse fibrosis. The contour of the diaphragm on the right flattened, sinus obliterated by spikes. COPD. Condition after surgery on right lung. Spirography (2002): ventilation lung function is not impaired.



Final diagnosis

► Main disease:

Chronic obstructive pulmonary disease (COPD). Chronic diffuse bronchitis in remission, condition after right-bilobektomii (1970) about congenital bronchiectasis. Pulmonary fibrosis.

► Concomitant diseases:

Chronic heart disease (CHD). Stable angina II fc. Cardioatherosclerosis. Cerebral atherosclerosis. Arterial hypertension stage III, 2 degree. Heart failure (CH) III f.c. by NYHA. Risk III (high). Encephalopathy 1-2 st hypertensive and atherosclerotic with cephalgic syndrome. Osteohondrosis of cervical spine in a stage of unstable remission. Deforming osteoarthritis with the defeat of the small joints of the feet, hands. Insufficiency of joint function 2 st., Ro 1-2st. Postmenopausal osteoporosis. Angiopathy of the retina in both eyes. Myopia initial stage. Autoimmune thyroiditis, diffuse goiter focal 1 degree. Euthyroidism. (2015.). Peptic ulcer of

NON-PHARMACOLOGIC:

- RECOMMENDATIONS TO MAINTAIN HEALTHY LIFESTYLE, DECREASE SODIUM INTAKE, LIPID LOWERING DIET, AEROBIC NON STRENUOUS EXERCISES
- FLU VACCINATION
- PNEUMOCOCCAL VACCINATION

PHARMACOLOGIC:

- TIOTROPIUM 18 MCG (SPIRIVA HANDIHALER) 1 TIME PER DAY FOR A LONG TIME
- SALBUTAMOL 100 MCG (VENTOLIN INHALER) 3-4 TIME AND WHEN NECESSARY
- LISINAPRIL 10 MG IN THE MORNING UNDER BLOOD PRESSURE CONTROL;
- ASPIRIN 75MG ONCE DAILY CONTINUOUSLY;
- REPEAT SPIROGRAPHY AFTER 3 MONTHS
- REPEAT VISIT TO PNEUMONOLOGIST, ENDOCRINOLOGIST AFTER 3 MONTHS.

EXACERBATION:

- OXYGEN (TARGET SATURATION OF 88-92%)
- SYSTEMIC CORTICOSTEROIDS (40 MG PREDNISONE PER DAY FOR 5 DAYS)

Summary and recommendation

Despite of compensatory possibilities of lungs of external respiration function is not enough for compensation of lost lung volume and the patient must be considered as a whole.

References

1. COPD . A spirometry guide for general practioners and a teaching slide set I available: [http: www.goldcopd.org](http://www.goldcopd.org)
2. [Guideline] Global strategy for diagnosis, management, and prevention of COPD: 2016. Global Initiative for Chronic Obstructive Lung Disease. Available at <http://goldcopd.org/gold-reports/> . Accessed: May 7, 2016.
3. American Thoracic Society
[http: www.thoracic.org/adobe/statements/spirometry](http://www.thoracic.org/adobe/statements/spirometry)