E2902
Effects of progressive isocapnic hypoxia on ventilatory response and respiratory center output in animal asthma model
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It's known that patients with lung disease such as asthma are more frequently hypoxemic than hypercapnic and airway obstruction has been shown by others to decrease ventilatory response both to hypoxemia and hypercapnia. Therefore the aim of this study was to determine whether the decreased hypoxic ventilatory response during airway obstruction is due to the low respiratory center output or mechanical abnormality of respiratory system. A rabbit breathing with resistive loads was used to test the effect of airway obstruction as does asthma. Ventilatory response (VE) to progressive hypoxia (ratio of change in VE to the change in oxygen saturation) produced by rebreathing tecniques (7% CO2, 40% O2 and balance N2), O2 tension in arterial blood and diaphragmatic electromiography EMGd, a reflection of respiratory center output, were studied before and after asthma simulation. The ventilatory response to hypoxia was less with added airway resistance (with decrease in both tidal volume and frequency) than without. The maximal increment VE was 65% ($P<0.05$) at PaO2 level of 43.0 mm Hg, while during unloaded breathing VE was 150% ($P<0.05$) at PaO2 level of 38.3 mm Hg, in comparison with control. EMGd had increased to117%($P>0.05$) and to 142% ($P<0.05$) of unloaded and loaded conditions, respectively, suggesting that the respiratory center output didn't reduce and neural mechanisms involved in ventilatory response. We concluded that the decrease in ventilatory response to hypoxia in asthma simulated rabbits is related to the mechanical load applied, decrease hypoxic response may be resulted from alteration of the respiratory system mechanics due to airway resistance.

E2903
Diagnostic value of induced sputum and nitric oxide in exhaled breath condensate to control treatment of bronchial asthma
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Aim: To study the value of induced sputum (IS) cytology and a nitric-oxide (NO) content in breath condensate to control treatment of bronchial asthma (BA).
Methods: IS and NO were determined in 53 asthmatics in dynamics. During BA exacerbation, the patients received budesonide inhalation suspension or prednisolon per os for 5-11 days. In remission anti-inflammatory therapy was prescribed according to degree of BA severity. 20 healthy volunteers were included in control group.
Results: In BA patients, in comparison with the control group a much greater number of eosinophils ($p<0.01$), neutrophils ($p<0.05$) and a smaller number of macrophages ($p<0.05$) in IS was observed. The amount of eosinophil was maximal in BA exacerbation, especially in the patients without preliminary basic therapy. In remission there was a decrease in the amount of eosinophils ($p<0.01$), an increase in the amount of macrophages ($p<0.01$). The increase in the NO content was observed in all BA patients both in exacerbation and remission, and was significantly greater in comparison with the control group ($p<0.05$). The greatest NO values were observed in exacerbation in the patients with severe and moderate course; especially without preliminary basic therapy. There was a negative correlation of NO and FEV1 ($r=-0.37$; $p<0.01$). In remission there was a significant decrease in NO ($p<0.01$), more pronounced in the patients with mild course of BA in the background of continuous corticosteroid therapy.
Conclusion: Monitoring the IS and NO indices is informative to assess efficiency of anti-inflammatory therapy in BA.

E2904
The role of atypical pathogens in acute exacerbations of bronchial asthma
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Setting: Assiut University Hospital.
Study Design: A serologically based prospective study.
Objective: To evaluate the role of acute infections with 4 atypical organisms in precipitating acute attacks of bronchial asthma among adults and children.
Patients and methods: Acute infections with 4 atypical pathogens were evaluated in 2 groups of patients with acute exacerbations of bronchial asthma, and compared with the corresponding rate in a matched control group. The first group of patients included 96 adults while the second one incorporated 88 children. Paired sera were tested using indirect immunofloresent method to establish the serological diagnosis.
Results: Acute infection with Chlamydia pneumoniae was detected in 25% of adults, compared with 2% in the control group, while, acute infection with Mycoplasma pneumoniae was confirmed among 15% of adult patients compared with 3% of control group. In contrast, no evidence of acute infection with Legionella species or Coxiella burnetii could be verified among adult patients.
On the other hand, no evidence of acute infection with any pathogen of the 4 atypical organisms could be demonstrated during acute exacerbations of asthma in the children group.
In conclusion, Acute infection with either Chlamydia pneumoniae or Mycoplasma pneumoniae has an important role in acute exacerbations of bronchial asthma among adults, while, infection with atypical organisms has no position in acute exacerbations of bronchial asthma among children.

E2905
Assessment of predictive factors for asthma exacerbations severity
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Several factors have been accused for asthma exacerbations, however, risk factors for severity of asthma exacerbation has not been evaluated sufficiently. We aimed to determine the predictive factors for severity of asthma exacerbation.
Retrospective analysis of data on 93 adult patients who visited our emergency-department because of asthma-exacerbation was reviewed. Forward logistic regression analysis estimated the strength of association of each variable with severe/very severe as compared to mild/moderate asthma exacerbation. Main independent variables were age, sex, smoking history, medication history (inhaler steroid using), compliance with medication, asthma staging according to GINA, presence of atopic diseases (rhinitis, conjunctivitis), prick test, provocative factors (respiratory tract infections, drugs), number of short-acting β-2 agonist using, number of visits to emergency department for asthma over one year, previous severe exacerbation, pulmonary functions (FEV_1, FVC, and PEF), and blood eosinophil count.
20 patients had severe/very severe (hospitalization in ICU and/or intubation because of asthma) and 73 mild/moderate asthma exacerbation. Severe asthma exacerbation was increased 1.5 fold by frequent using of short-acting β-2 agonist (95% CI:0.6-5.3, p=0.003) and 3.6 fold by incompliance with medication (95% CI:1.3-9.9, p=0.013). Also, low FEV_1 was a predictive factor for severe exacerbation (p=0.019).
In conclusion, different predictive factors, especially, frequent using of short-acting beta-2 agonist and incompliance with medication may be associated with severe asthma exacerbations as compared to milders. This suggests different mechanisms are responsible for severity of asthma exacerbation.

262. Clinical aspects of tuberculosis

E2906
The study of nonspecific microflora in lung tuberculosis patients
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Tuberculosis is still wide spread in Russia. Patients with lung tuberculosis frequently have low social and economical status, smoke, suffer of concomitant nonspecific infections. Our aim was to compare nonspecific pathogens sowing frequency from tuberculosis patients' phlegm, treated at the tuberculosis dispensary at 1997-1998 (958 isolates) and 2002-2003 (132 isolates). Results are presented in the table below.
Ampicillin resistance of *Escherichia coli* taken from patients with active tuberculosis in 1997-1998 and 2002-2003 years amounted 66.7% and 70.1%, respectively, chloramphenicol resistance – 50.9% and 52.2%, but was still susceptible to ciprofloxacin (4.9% of isolates resistant). We noted the rise of *Staphylococcus aureus* gentamycin resistance from 19.3% to 43.2%. *Streptococcusspp.* was highly susceptible to spiramycin, generation II cephalosporines, amoxicillin/clavulanate. *Streptococus pneumonia*, sowed in 2002-2003 was resistant to oxacillin and oleandomycin in 100% of cases, to cefalexin – in 66.7% of cases. *Pseudomonas aeruginoza* was still susceptible to ciprofloxacin (14.3% of isolates resistant) while regarding other studied antibiotics in vitro 40% of cultures were resistant.

Frequency of pathogens sowing in 1997-1998 and 2002-2003.

Pathogens	1997-98	2002-2003
Escherichia coli	31.4%	31.1%
Streptococcus pyogenes	25.9%	15.9%
Staphylococcus aureus	12.0%	15.9%
Streptococcus viridans	6.1%	15.2%
Pseudomonas aeruginoza	0.4%	5.3%
Streptococus pneumoniae	5.3%	3.0%

Conclusion: pathogenic nosocomial microflora at the tuberculosis dispensaries is resistant to many of the antibiotics and is a real threat to the patients.

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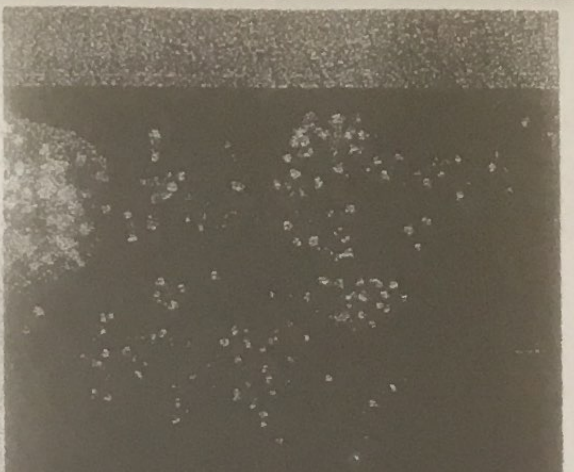

ABSTRACTS
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