34. Clinical problems: miscellaneous

E403
Congenital cystic adenomatoid malformation type I mimicking bronchogenic cyst in 13-year old girl
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The authors present a rare case of *congenital cystic adenomatoid malformation type I* diagnosed in adolescent girl. 13-year old girl was admitted to the hospital because of symptoms suggesting pneumonia. There was *no history* of any previous disease including pulmonary problems.The patient has suffered from progressive dyspnea and pain in the left hemithorax for few days before admission. On auscultation there were no breath sounds below scapula at the left hemithorax. The X-ray showed homogenous opacity in the left lower lobe. On ultrasonography of the thorax and abdomen adrenal tumor was suspected. The chest computed tomography scan disclosed *12 cm mass* with fluid and thin-wall cavities suggesting bronchogenic cyst. Girl was treated by antibiotics and operated twelve days after admission to the hospital. The lower left lobe with *giant (700g weight) cyst* was removed without any complication. Histopatologicaly *congenital cystic adenomatoid malformation type I* according to Stocker's modification was diagnosed.
References: 1. Eur J CardioThorac Surg 2000; 18; 720 - 723 2. Eur J CardioThorac Surg 2005; 28; 483 - 489

E404
Inflammatory pseudotumors of the lungs: two case reports
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Introduction: Inflammatory lung pseudotumor is a broad histological entity, including the organising pneumonia or fibrohistocystic type and plasmacellular granuloma, depending on predominating cells. This is a report of two cases.
Case 1: A 66-year old male reported cough, fever and a body weight loss; the chest X-ray presented with a homogenous shadowing of the upper right hemithorax; the right upper lobe atelectasis seen on CT scanning and a tumor in the right main bronchus on bronchoscopy; an inflammatory polyp suspected; the right upper lobectomy performed and the definite diagnosis of inflammatory pseudotumor - the organising pneumonia type, established. Eleven months after surgery, the patient is free of symptoms, in an excellent general health condition,.
Case 2: A 73-year old female, presented with cough. A round lesion in the right hemithorax seen on the chest X-ray; CT scanning delineated a 2.5x2 cm sized lesion in the posterior segment of the right upper lobe, and up to 2 cm enlarged pericarinal and paraaortal lymph nodes; a normal bronchoscopy finding obtained. Due to suspicion to a malignancy, a surgery was indicated. The right pulmectomy performed and inflammatory pseudotumor definitely confirmed. However, on the fifth postoperative day, the patient developed fatal cardiological complications.
Conclusion: Although rare, inflammatory pseudotumor can imitate lung cancer and represents a diagnostic problem. It should therefore be included in the differential diagnosis of lung cancer.

E405
Pulmonary hydatid cyst revealing complications
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Pulmonary hydatid cyst (PHC) management(M) needs early diagnosis(ED) when the cyst(C) is intact, allowing conservative surgery (S), whereas complicated (CD) C result in lung resection. Complications(CP) following rupture (R) of PHC need to be recognised in order to ovoid CP.
We report CD PHC radioclinical aspects that can help in ED through 50 cases (CS) of PHC. 21(42%) were simple (SP) PHC and 29 (58%) CD PHC.
Revealing symptoms were mostly those of bronchial rupture of the C (22 C S: 75%). Patients (P) presented with abscess like infection of the C (10 CS: 30%) and pneumonia in 4 CS. In 3 CS, hemoptysis with large opacities evoqued cancer. Fiberscopy (F) showed a hydatid membrane (HM) occluding the bronchus in 5

CS. C R in the pleural space was inaugural (IN) in 6 P (25%), 5 empyema and 1pyo-pneumothorax. In 1 case, pulmonary embolism symptoms were inaugural due to the R of the C in the pulmonary artery.
Chest x rays (CXR) suggest PHC (13 CS: 45%). CT showing low dense opacities and a trapped HM is most helpful. A liver localisation (L) is suggestive (25%).
S is riskier in CD C than in SP C, 20% of CP vs 5%. ED of PHC before C R is essential. However, some of these CP could have less awful outcome, with no S necessary: 7 cases. Spontaneous cure of the C occurred following bronchial emptying of the C content (3), chest drainage for a pleural C R (3) and bronchoscopic HM extract in 1 case.

E406
Bronchogenic cyst simulating emphysematous bulla. A case report
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Bronchogenic cysts are embryogenic congenital malformations wich are incidentally detected. They are foregut derived developmental abnormalies.
Usually mediastinal, they could in 1/3 of cases be parenchymal where they simulate other different diseases and cause differential diagnosis problems.
We report a case of a smoker 52 years aged patient who presented with recurrent bronchorrhea, 2 lung abcess episodes and recent hemoptysis and fever. Chest X rays showed a giant hydroaeric cavity of the lobe lower.
CT performed after antibiotherapy revealed a large regular walled cystic cavity of the left lower lobe with a small hydroaeric content. Surgery was indicated and a lingulectomy performed. Pathology of the resected cyst showed a fibromuscular walled cystic mass containing ciliated cells and cartilage ilots, all consistent with a parenchymal bronchogenic cyst. A literature review is performed.

E407
Thymoma-associated immundeficiency; a case report
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We report on a 66 year old patient sent to our hospital because of general illness, expectoration, fever and dyspnea. Chest X-ray showed infiltration of both lungs, pleural effusion and a mass in the upper ventral mediastinum.
In his history were multiple infections of the skin, the lungs, and conjunctivitis since at least 3 years. The first finding of a mediastinal mass was 3/2003 in a computertomography.
We saw a weak, pale patient with body temperature of 39,4°C, enoral soor, rales over both lungs. Blood analysis showed signs of infection, a lack of antibodies and several abnormalities among the white blood cells. Due to a intravenous treatment with antibiotics and substitution of immunglobulines the patient was recovering.
By sternotomy a 1200 g tumor was resected. Because of an infiltration of the pericard a plastic had to be done. Histology showed a mixed type thymoma(WHO-classification: AB).
We made the diagnosis of a thymoma-associated immmundeficiency with a agammoglobulinaemia and a B-Cell defect, named GOOD syndrom.
After the operation the patient was quickly recovering. He is now learning the subcutaneous substitution of antibodies.
A radiation of the mediastinum because of the pericardial infiltration will be following.
Even a mediastinal mass was seen 3 years before and numerous bacterial infections were obvious the time to diagnosis took that long time.

E408
Blastomycosis. A case report in a non endemic area
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Blastomycosis (B) is a endemic mycotic infection in some countries (0.6 cases/100 000 a year in USA). But it is exeptional in Tunisia (T).B could either be asymptomatic, inducing insidious disease protective cellular immunisation, or symptomatic with pulmonary (P) or extra P localisations (bone, skin ...).
Our study aimes to discuss through a case with P localisation the different diagnosis and treatment features of (B) and the possibility of its occurrence in non endemic areas like Tunisia.
A 45 years smoker farmer, presented with cough, hemoptysis, rachialgia and lower left limb pain for 2 months. Chest X ray showed a right lung upper heterogenous opacity with necrotic aspect on CT. Bone scintigraphy revealed multiple vertebral and right femoral hyperfixation suggesting cancer metastasis. On bronchial fiberscopy the right upper lobar bronchus was infiltrated but biopsies showed no tumoral structure. Tuberculosis was eliminated as well as HIV infection on sputum exam and serology. No immunodeficiency features were found. Pathological exam of bronchial biopsy surprisingly showed granulomatous mononuclear and giant cells, with spheric cytoplasmic PAS and Grocott positive thick double walled inclusions, with a unique exhuberace with large implantation. Confirmation was made by typical blastomyces dermatitidis micella growth from bronchial aspiration fluid and biopsies. Itraconazol was indicated and evolution was favorable. B is inexistant in T. Only 3 cases have been previously reported within 20 years. B could mimic other diseases, resulting in diagnosis delay. It could be evoked in case of environmental exposure to earth moisture with suitable clinical features. Lung cancer however should never be ignored.

E409
Mucosal associated lymphoid tissue (MALT) lymphoma of the lung. A case report
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We report a 58-yr patient (P) case, who presented with cough, and bilateral alveolar shadows of the lungs on chest X rays. Bronchial fiberscopy was normal. On biology, there was an increased gamma globulinemia. Right transbronchial and left transthoracic biopsies showed lymphomatous malignant cell proliferation (CP) with diffuse lymphoplasmocytic infiltrate and rare tumoral epithelial ilots on immunohistochemy staining, cells were positive in particulr to BCD20 and CD79a. No extrathoracic localisation nor extension to other Mucosal sites was found. Considering the low malignity and the controverse about therapeutic attitudes wich vary in literature from chemotherapy to abstention. (P) was put on corticosteroids. After a 2 years survey, a gastric localisation occurred.
Lung born primitive lymphoma are third in frequency among all organ primitive (12%). Age of onset is 50-60-yr. Clinical symptoms are not specific, 50% being asymptomtic.
MALT lung lymphome bilateral in 60-77% on CT with possible regional lymph nodes.diagnosis is often incidental. Histology shows interstitial and peribronchiolar B CP with reactional follicular hyperplasy. According to REAL and WHO classification, low malignity B phenotype is most frequent: 58-60%. M monoclonal gammapathy with normal b2 microglobulin is present in 20-60%. Pathogenesis is based on chronic infectious or auto immune antigen stimulation. Therapeutic options, vary from surgery to chemotherapy and even abstention. Prognosis remains favourable. 5-yr survival is>80%

E410
Place of azoles in the treatment of allergic bronchopulmonary candidiasis
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We treat a 50-years-old patient for allergic bronchopulmonary candidiasis (CBPA). The diagnosis is made by a history of asthma, bilateral pulmonary infiltrate, immediate skin reactivity and precipitating antibody against Candida albicans, elevated total serum IgE concentration (>3000 UI/L), eosinophilia (40%) and two positive sputum cultures for Candida albicans. The patient was treated during one year by oral administration of prednisone without any improvment in clinical symptoms or serologic tests.
We decide to associate to corticosteroid therapy an antifungal treatment (itraconazole). The serum IgE concentration and eosinophilia decreased with clinical improvement after four weeks. The following case report illustrates the benefice of combined antifungal and corticoid treatment.

E411
Effect of bariatric surgery on six-minute walk test in severe uncomplicated obesity
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Objective: Six-minute walk test (6mWT) is a simple index of functional capacity in healthy people and it has been used to estimate exercise capacity in obese subjects. The aim of the study was to find out whether weight reduction induced by laparoscopic adjustable gastric banding (LAGB) improves the functional capacity in severely obese during 6mWT.
Design: A prospective one-year follow-up study, patients being their own controls.
Setting: Hospital, Casoria Naples.
Subjects: A consecutive series of 15 obese patients who had LAGB.
Main outcome measures: Body mass index (BMI), walking distance, heart rate, dyspnea, and respiratory function tests.
Results: 15 patients (all females) were evaluated. Mean BMI (kg/m^2) decreased from 42.1 (range 35-49) before to 31.9 (range 25-38) postoperatively. The distance walked increased from 475.7 meters (range 380-580) before operation to 626.3 meters (range 435-880) one year post-operatively ($p < 0.0001$) and the dyspnea score after 6mWT was significantly reduced after operation. All functional variables after 6mWT showed improvement one year postoperatively.
Conclusion: Weight reduction in obese increase the functional capacity during walking. The improvements are refected in the patients' own assessment.

E412

Oxygen prescription, monitoring and use as a nebuliser driving gas

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Introduction: Oxygen is a drug and needs to be prescribed correctly. Despite its life saving effects, it is dangerous if incorrectly administered. Incorrect use leads to damage of alveolar membranes, inflammation and oedema. It is also life threatening in those patients relying on hypoxic drive to breathe (COPD). Oxygen prescription and monitoring is key to its correct use.
Method: Our audit recorded the indications, prescription, monitoring and the cessation of oxygen therapy. Inclusion criteria: Patients on oxygen in the medical wards at WMUH over a 2 month period (n=100). The American College of Chest Physicians guidelines (1984) were used as Gold Standard.
Results: 64% of patients had no reason for starting oxygen therapy recorded in their notes. Only 12% had oxygen prescribed on their drug chart. Of the 42 patients wearing nasal prongs, 14% had flow rates exceeding 6L/min.
86% of patients had their oxygen saturations recorded every shift by the nurses. Only 21% of those started on oxygen were stopped according to guideline recommendations.
Of those on nebulisers (n=51) 5% had been prescribed a driving gas (air/oxygen) and only 2 patients on >35% oxygen were given oxygen via nasal prongs whilst being nebulised. In those with COPD, repeat ABGs were recorded in only 40% of cases.
Conclusion: Oxygen is being poorly prescribed and no record is being kept as to why the therapy is being started. Monitoring by nurses is satisfactory, but once commenced the majority of patients are not having their treatment stopped correctly. An oxygen prescription chart is currently being trialled in the trust, giving recommendations on correct oxygen use and appropriate delivery systems, with promising initial results.

E413

An audit of current practice of assessment for long term oxygen therapy (LTOT) in a district general hospital (DGH) in the United Kingdom(UK)

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Background: The British Thoracic Society (BTS) have issued new guidelines for assessment of patients with chronic hypoxaemia for LTOT, which refers to the provision of continuous oxygen to patients at home, with a PaO2 at or below 7.3 kPa (55 mm Hg),when breathing air during a period of clinical stability.
Aim: To assess our current performance in assessing these patients against existing guidelines, in view of the need to set up appropriate services based on new recommendations.
Method: A retrospective audit of the indications and assessment process of patients, currently on LTOT at home, in Telford town, UK.
Results: Total thirty-eight patients were studied and the outcomes are shown in tables 1 and 2 respectivly.

Table 1 Demography and Indications for LTOT

Number of patients		38
Setting	Out patients	22 (57.9%)
Setting	In-patients	16 (42.1%)
Indications	COPD	23(60.5%)
Indications	Non- COPD	15(39.5%)
COPD on Optimal therapy	Yes	17(44.7%)
COPD on Optimal therapy	No	6 (15.8%)

Table 2 Assessment methods and Specifications for LTOT

Pulse Oximetry		38(100%)
Arterial blood gases – twice		12(31.6%)
PaO2 Satisfying criteria		28(73.7%)
Specifications mentioned	Duration	30(78.9%)
Specifications mentioned	Flow	35(92.1%)
Follow up		30(78.9%)

Conclusions: Current assessment and prescription standards for LTOT in patients with chronic hypoxaemia in our hospital were inadequate and is due to lack of resources. The new national guidelines would help to set up a dedicated service and improve standards.
Reference: 1. Domiciliary Oxygen Therapy Services. Clinical Guidelines and Advice for Prescribers. A report of the Royal College of Physicians. 1999

E414

Uptake and needs of patients referred for oxygen assessment. A guide to future service needs

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Arrangements for home oxygen therapy (HOT) has changed considerably in the United Kingdom this year. Funding the new service has not been fully established. In order to estimate the likely requirements we present our experience of the take up of our HOT service over the last 2 years. Patients were either assessed when stable for >3 months or reassessed on a yearly basis. Anyone using >21cylinders of oxygen per month are also referred. Numbers and characteristics are shown in the table.

New patient HOT clinic

Year	03/04	04/05
Number referred	62	84
Men	32	30
mean age	72	72
Prescribed Oxygen	19(30%)	33(39%)

In general only 39% met pathophysiological parameters for HOT. Many of those not requiring oxygen therapy were seen in a relaxed breathing clinic with effect. In the review clinic approximately 10% required an increase in oxygen flow rates, 14% a decrease and 3% had no clinical need for the concentrator which was then removed. 3 patients had combustive complications of smoking in the presence of oxygen of whom 1 died in the subsequent house fire. We now routinely measure carboxyhaemoglobin on review. Ambulatory assessments were not carried out but based on these figures there is a large need for increased resources to support the majority of patients who do not meet accepted interventional thresholds for oxygen therapy. The data supports the clinical components of the new British service but additional services will also be needed to deal with the breathless but mildly hypoxic or normoxaemic patient otherwise oxygen usage will be unnecessarily excessive and expensive. Cost implications may well be underestimated.

E415

Effectivenss and cardiological safety of short-acting combined broncholytics

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The aim: to compare two combined short-acting broncholytics – ipratropium bromide+fenoterol vs ipratropium bromide+salbutamol according their effectiveness and cardial effects in 6-hours monitoring in moderate COPD patients.
Materials and methods: 15 moderate COPD (FEV_1 (58,6 ± 3,3)%pred. in the age > 40 years, smoking status (18,8 ±3,5) pack-years) were investigated with the use of spirometry ("MasterScreen", Erich Jaeger) and ECG before and in 6-hours monitoring after the use of – ipratropium bromide+fenoterol 42/100 mcg (I day) and – ipratropium bromide+salbutamol 42/240 mcg (II day). FEV_1 was assessed after 5, 15, 30, 45 min, 1, 2, 3, 4, 6 hours after the inhalation of study drug; ECG (heart rate (HR), Q-Tc interval) was carried out after 20 min, 1, 2, 3 and 6 hours. Aslo tremor scale was assesed.
Results: peak increase of FEV_1 was more expressed (7,25 ± 1,2) % after 30 min of ipratropium bromide+fenoterol use and lasted over 4 hours vs (4,2 ± 1,1) % after 45 min of ipratropium bromide+salbutamol use with the reservation of broncholytic effect over 3 hours. HR had no significant changes during 6 hour observation after both medicines (stayed on the level (71,8±2,2) - (74,0 ± 2,9) beats/min, also Q-Tc interval (stayed on the level (383,8 ±8,3) – (400,6 ± 9,2) ms. Tremor after the use of studied broncholytics wasn't observed in all observed patients.
Conclusions: both medicines were safe -without no raise of HR, prolongation of Q-Tc interval. Ipratropium bromide+fenoterol, in spite of 2,4 fold lesser content of β_2-agonist was more potent (more expressed tendency to the improvement of FEV_1), broncholytic with earlier beginning and longer duration of action vs combination ipratropium bromide+salbutamol.

E416

Cushing's syndrome caused by low dose inhaled steroid use for non-existent airways disease. A diagnostic lesson

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A 53 year old man was admitted to our hospital with chest pains suggestive of angina. He had undergone single-vessel coronary artery bypass grafting in 1983, followed by triple-vessel surgery in 1999. Despite this he smoked 10 cigarettes a day. He had complained to his GP ten years previously of breathlessness and was diagnosed with asthma on the basis of history alone. He was commenced on inhaled glucocorticoids and by the time of this admission was on Beclamethasone 200mcg, two puffs twice daily. In this time he had only required two short courses of oral steroids and was not using excessive inhaled steroid according to prescribing records. He was known to have a moderate degree of left ventricular dysfunction and he was also taking rosuvastatin, aspirin, ramipril and bisoprolol, which had never affected his "asthma".
On examination he appeared cushingoid but he had a low morning cortisol level at 54nmol/L and low ACTH(<5ng/L). Short synacthen test was borderline with a baseline level of 28nmol/L rising to only 197nmol/l at 1 hour. A depot synacthen test confirmed the diagnosis of Cushing's syndrome(see table). He was commenced

on replacement therapy and weaned off inhaled glucocorticoids with no adverse effects.

Depot synacthen test

Time(hours)	Cortisol(nmol/L)
0	<28
0.5	119
1	181
2	230
4	237
8	319
24	613

It is well known that even low doses of inhaled glucocorticoids can cause adrenal suppression (Zimmerman B et al. Journal of Allergy and Clinical Immunology:101(3):425-6 March 1998). This case demonstrates the importance of accurately diagnosing asthma so as to minimise exposure to the risks involved in its treatment.

E417

The role of nitric oxide metabolites for diagnosis of atopy in children

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Background: The steadfast growth of atopic diseases stimulates developing non-invasive methods for early diagnosis of atopic status. These methods can be used for the detection of atopic risk groups including children population.
The aim of the study was to investigate the level of total nitrite/nitrate (TNN) in exhaled breath condensate (EBC) as the stable final metabolites of nitric oxide that could be used as biomarkers of atopic inflammation.
Materials and methods: We enrolled 189 children without any form of atopy verified. A questionnaire study for detection atopic signs (GINA) was performed among them as well as the analysis of TNN level in EBC by modified Griess method.
Results: Some groups of children with atopic signs and higher level of nitric oxide metabolites in EBC have been recognized during the comparison of questionnaire study data with the TNN level in EBC. The more atopic signs were found, the more high and significant increase of the TNN concentrations were determined.
The children with 1 or 2 signs of bronchial asthma (n = 106) did not have significant changes of TNN concentrations in EBC: 4.72±0.75 mkM compared to 4.29±0.21 mkM in healthy children (n = 71).
The children with 3 or more signs of bronchial asthma (n = 12) had a significantly increased TNN concentrations: 6.82±2.65 mkM compared to 4.29±0.29 mkM in the control group. As the supplementary clinical investigations reveal, the children with 3 and more signs of bronchial asthma were in risk for the development of bronchial asthma.
Conclusion: Therefore, the TNN concentration in EBC can be used as pre-clinical markers of atopy in children for the determination of risk groups and well-timed pharmacotherapy.

E418

Respiratory symptoms in patients submitted to 24h pH-monitoring

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Aim of the study was to investigate respiratory symptoms in a series of consecutive patients who underwent 24h pH-monitoring for symptoms of gastroesophageal reflux (GER). A self administered questionnaire was utilized to collect data on age, sex, smoking habits and respiratory symptoms. Proximal and distal esophageal 24h pH-monitoring was carried out using combined glass electrodes connected with a dual-channel pH-meter.
588 consecutive patients (491 without, 97 with asthma; 47.2 ± 15.1 yr, 40% females), were studied. In subjects without asthma reporting cough, a higher number of proximal refluxes than in subjects without the symptom was found ($p<0.003$). There was no association between wheezing or phlegm and parameters of GER. The number of episodes of acute bronchitis during the previous 12 months was significantly related to the number of proximal refluxes ($r= 0.26$, $p< 0.001$). Among asthmatics, subjects reporting wheezing and cough presented a higher number of refluxes in the proximal esophagus than those without symptoms ($p<0.01$). In subjects complaining of phlegm, the parameters related to the acid exposure of the distal, but not of the proximal esophagus, resulted significantly higher than in patients not reporting the symptom ($p< 0.01$). Also in asthmatics, there was a relationship between the episodes of acute bronchitis in the last year and the number of proximal refluxes ($r= 0.41$, $p< 0.01$).
Our results indicate that 1) both in asthmatic and nonasthmatic subjects, cough and the number of episodes of bronchitis are related with the degree of acid exposure of the proximal esophagus; 2) in asthmatics, wheezing is associated with proximal reflux, whereas distal reflux is related to the complaining of phlegm.

E419

Implementation of national strategy in BA treatment in Russia

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The cutting of budgetary financing for the public health resulted in decreasing the number of beds in pulmonology clinics and restricted possibilities of the hospital cure of bronchial asthma (BA). So, at present the hospitalization of patients with BA of light degree is ceased, the stay terms in hospital for patients with BA of mean degree are limited. The supporting treatment and out-patient's cure become essential kinds of medical aid for patients.
The Russian pulmonology specialists have a task of ensuring the standard treatment for patients with bronchial asthma under availability of scanty material and finance resources. The utilization of domestic drugs (saltos, salben, benacort) in terms of this approach provides the efficient treatment comparable with one while using foreing preparations. Furthermore, the costing of that treatment is 7-10 times cheaper because of low prices for Russian medicines.
The examination carried out on the basis of the Kaluga Region Hospital showed that having even equal clinical effectiveness, the direct expenses for curing patients with BA of severe degree were reduced by 6.8 times (2514 to 369 USD), BA-patients of mean degree by 7.8 times (1095 to 141 USD). The cost for out-patient treatment was especially diminished (by 6.5 and 10.0 times, correspondingly). The use of Russian drugs allowed to cut down individual expenditures of patients for supporting therapy. The cost of supporting therapy for patients with BA of severe degree makes up 126 USD per annum in comparison with 1300 USD/year while using imported medicines; for patients with BA of mean degree 62 USD/year in comparison with 700 USD while using imported drugs.

E420

The influence of different shemes of basic treatment on functional indices in moderate-severe astma patients

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The aim of investigation: to compare the effectiveness of different schemes of basic antiinflammatory treatment on lung volumes, airway resistance and bronchial permeability in moderate-severe asthma patients.
Materials and methods: 30 severe asthma patients (FEV_1 < 50%) after 2 weeks run period (daily doses 500 mcg of fluticasonum) were randomised 1:1 to receive fluticasonum 250 mcg + salmeterolum 25 mcg BID (I group), or abovementioned combination + tiotropium bromide 18 mcg OD (II group) during 2 months period. Data of bodyplethysmography and spirography (MasterLab, Erich Jaeger) were studied before the beginning of studied treatment, after 1 and 2 months of treatment.
Results: in I group Rtot, TLC, VC keeped on the primary level, to some degree decreased RV, there was a little trend for improvement of FEV_1 and MMEF. In II group we observed more expressed tendency to the improvement of Rtot, RV, ITGV. FEV1 raised from (43,6 ± 2,8) till (52,1 ± 3,7) % ($p < 0,05$) to the end of I month and to (59,3 ± 4,8) % ($p < 0,05$) after 2 month. Similar dynamics was observed in media and small bronchi. Significantly vs basic data and data after the 1 month of treatment ($p<0,05$) increased FEF_{50} from (19,5 ± 2,5) till (37,5 ± 5,4) %, FEF_{25} – from (21,5 ± 2,0) till (36,2 ± 4,1) % in the end of treatment.
Conclusions: Addition of two prolonged broncholytics from different groups to the basic anntiinflammatory treatment without increasing the dose of inhalative steroide in poorly controlled moderate-severe asthma patients was more effective treatment scheme and provided higher improvement of indices of function of external breathing vs addition of one prolonged broncholytics.

E421

Gastro-oesophageal reflux in patients with chronic respiratory diseases

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The prevalence and clinical consequences of gastro-oesophageal reflux disease (GERD) in chronic respiratory disease (CRD) are not well characterized. 50 Patients with CRD who were suspected to be suffering GERD based on complaints and clinical history underwent chest X-ray, spirometry, laryngoscopy, bronchoscopy (BS), oesophascopy (OS) and oesophageal 24-hour pH-monitoring. In case of confirmation of GERD diagnosis along with basic therapy being conducted previously, PPI with prokinetic therapy was prescribed for 28 days. Treatment results were evaluated after 4 weeks during repeated clinical-instrumental checkup. In spite of typical complaints, 10 Patients (20%) were free of any bronchopulmonary pathology on clinical, X-Ray and BS investigations. OS revealed oesophagitis in the lower 1/3 of the oesophagus in all the 50 patients. The results of 24-hour pH-monitoring were confirmatory for GERD in 46 of 50 patients (92%). The anti reflux therapy provided complete regression of all the oesophageal symptoms of GERD in 41 of 50 patients (82%). 40 of 50 patients (80%) noted a decrease or disappearance of respiratory complaints (relief of cough, alleviation and reduction of frequency of breathlessness, sleeping improvement). BS revealed superficial

endobronchitis in only 2 patients (4%), which was present in 80% of patients before the treatment. In patients with bronchial asthma (n=18) the anti reflux therapy enabled to stop using beta-2 blockers in 44% of patients and significantly decrease the frequency of their usage in 22%, the variability of peak FEV decreased on average from 25% to 16%. Anti reflux therapy is successful treatment in the large majority of patients with CRD and symptomatic GERD.

E422

The spectrum and frequency of prolonged (subacute) cough in Hokuriku area of Japan

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Background and objective In our region, cough variant asthma (CVA), atopic cough (AC) and sinobronchial syndrome (SBS) are major causes of chronic cough defined as isolated cough lasting 8 weeks or more. Prolonged (subacute) cough is defined as isolated cough lasting 3 to 8 weeks. It has been no published data on causes of prolonged cough. We prospectively examined the spectrum and frequency.
Subjects and methods All consecutive patients with isolated cough lasting more than 3 weeks, who visited to our Hospital and 20 related hospitals from June 1 to December 31, 2001, were registered. Causes of prolonged (subacute) cough were diagnosed based on closer questionnaire, blood examinations, chest and sinus roentgenograms, induced sputum, pulmonary function, cough sensitivity to capsaicin, bronchial responsiveness to methacholine and efficacy of treatment according to diagnostic criteria for each cause recommended by Japanese Cough Research Society.
Results A total of 219 patients with prolonged cough were enrolled. 65 patients were missed before completion of the diagnostic procedures. Definite and probable diagnosis was made in 140 patients, but causes were not determined in 14 patients (9.1%). Out of the 140 patients, AC was diagnosed in 50 patients, CVA in 34 patients, sSBS in 23 patients, post-infectious cough (PIPC) in 14 patients, cough predominant asthma in 13 patients and others in 6 patients.
Conclusion In our area, atopic cough, cough variant asthma and sinobronchial syndrome are 3 major causes of prolonged cough as well as chronic cough. Diagnosis of prolonged cough is more difficult compared with that of chronic cough.

E423

Causes of chronic cough in the Lasithi district during 2003-2005

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Purpose: Main causes and frequency of chronic cough.
Material and Methods: Clinical and laboratory examination was performed in 156 patients who presented a cough with duration of more than 15 days.
Results: see Table

Disease	No. patients	%
1) Asthma	48	31
2) Bronchial hypersensitivity	37	24
3) Allergic rhinitis	33	21
4) Chronic bronchitis	22	14
5) Pulmonary fibrosis	7	5
6) Inhalation of irritant substances	4	2.5
7) Lung cancer	4	2.5
8) Gastroesophageal reflux disease (GERD)	1	0

Conclusions: The main cause of chronic cough in the Lasithi district was asthma, bronchial hypersensitivity and allergic rhinitis. Diagnosis was based on patient history, imaging findings, blood exams and spirometry.

E424

Etiology of chronic cough in 326 paitents visited in a specialty clinic in north of Iran

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Purpose: Cough is one of the most common presenting complaints in general and internal medicine clinics. We designed this study to define the etiology of chronic cough in a specialty clinic in north of Iran.
Method: We retrospectively reviewed the files of 326 patients (age: 16-86 years, 55.8% female, 44.2% male) that presented to a respiratory clinic during 6 months period (March-August 2005) to find the etiology of chronic cough. We defined chronic cough as a cough that persisted more than 2 months. We excluded patients on angiotensin antagonists.
Results: Occupational irritants, smoking, and exposure to animals were predisposing factors in 13.2%, 8.9%, and 11% respectively. Cough persisted more than 1 year in 51%. Dyspnea, wheezing, post nasal discharge, heartburn, and sleep disruption were mentioned by 67, 59, 41, 31, and 11% of patients. Physical examination revealed wheezes, crackles, and abnormal throat findings in 28.5, 6.1, and 24.2%. Chest X-ray, sinus X-ray, HRCT, sputum exam, spirometry and bronchoscopy were positive in 26, 20, 5, 1, 40, and 1% of cases.
Asthma, chronic postnasal drip syndrome (PNDS) and reflux were the most common causes of chronic cough in our patients and constituted 34.3%, 21.5%, and 12% of all cases. PNDS and reflux both were present in 10% of cases. Other diagnoses and their frequencies included: chronic bronchitis, bronchiectasis, cancer, cough asthma, interstitial lung disease in 6.7, 4.9, 1.8, 1.5, and1.5%. Tuberculosis, emphysema, eosinophilic bronchitis, and cardiac diseases were the etiologic factors in 0.9%.
Conclusion: Asthma, chronic PNDS, and reflux were the most common causes of chronic cough in our patients.

E425

Effect of oesophageal monitoring on objective cough frequency in chronic cough

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Background: Gastro-oesophageal reflux disease (GORD) is well recognised as a significant cause of chronic cough and is typically diagnosed using ambulatory 24 hour oesophageal pH monitoring. We have found that some patients report less coughing with the oesophageal probe in situ.
Methods: We studied 10 chronic cough patients,[7 female, median age 56.6 years (SD±10.6), median cough duration 5.5 years (IQR 2.9-7.0), FEV_1 percent predicted 93.5% (SD±10.7)]. Ambulatory cough monitoring (modified IAudio MP3 player, with lapel microphone) over a 24 hour period was performed, with and without the oesophageal probe in place. Cough was manually counted and quantified in cough seconds (i.e. the number of seconds containing at least one explosive cough phase). Cough visual analogue scale (VAS) scores were also recorded.
Results: Daytime VAS scores were significantly lower with the oesophageal probe in place (median 41.0mm, IQR 22.5- 57.3) than without (median 50.5mm, IQR 38.3-70.3)(p=0.04). However, there was no differnece in overnight VAS (median 21mm, IQR 4.8-40.5 and 17.0mm, IQR 2.8-57.8)(p=0.88).
Time spent coughing was not significantly different with or without the oesophageal probe for daytime (median 18.9cs/hr, IQR 4.2-27.0 and 24.0cs/hr, IQR 17.1-33.8) or night time (median 1.6cs/hr, IQR 0.3-9.9 and 4.8cs/hr, IQR 2.9-12.0)(p=0.17 and p=0.33 respectively).
Conclusion: Oesophageal probes may alter the patient perception of cough.

E426

Inflammatory bowel diseases and lung

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Introduction and aim: Extraintestinal findings are common in inflammatory bowel diseases (IBD); however pulmonary involvement is rare. Previous studies reported airway disease in particular bronchial hyperreactivity (BHR), interstitial involvement, necrobiotic parenchymal nodules, pleural effusion, and pulmonary vascular disorders in patients with IBD. This study aimed to evaluate patients with IBD in regard to pulmonary involvement.
Materials and Methods: Nineteen patients with IBD (11 colitis ulcerosa, 8 Crohn's disease) were enrolled. They were asked for pulmonary symptoms, their chest radiographs, thorax high resolution computed tomography (HRCT) and spirometry results were analyzed.
Results: Ten (53%) of the patients were female, 9 (47%) were male. Mean age was 41.26(15-67). Radiologic findings were as follows; 14 patients had normal radiologic evaluation, 2 (10%) patients had bronchiectasic changes, 1 (5%) patient had interstitial changes, 2 (10%) patients had emphysema. Twelve (63%) patients had reversible bronchoobstruction, 8 of them had shortness of breath, cough, and symptoms consistent with BHR. Two patients were diagnosed as asthma.
Conclusion: Pulmonary involvement should be considered in patients with inflammatory bowel diseases.

E427

Aspiration a communicator with tracheostomyzed patient

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A 53-year-old man, who underwent total laryngectomy 1 years ago presented with progressing dyspnea and hemoptysis for one month. In the chest CT, endobronchial annular opacity appointed in the right main bronchi. Flexible video-bronchoscope was performed because of endobronchial malignancy suspicion. FOB revealed a foreign body in the distal side of right main bronchi. The forceps was used to retrieve the object. It was a communicator which was located after larenks

operation one years ago. It was closing during the inspirium and opening during the expirium. So that it caused dyspnea.
Aspiration of tracheobronchial foreign bodies occurs more commonly in children. The peak incidence of foreign body aspiration occurs during the second year of life in the childhood. Foreign-body aspiration is serious and potentially fatal when it cause complet trachea obstruction. If the foreign body is underside of the trachea is causes the ventilation problem, dyspne and infection problem.
This case suggests that the physicians should inform their tracheostomized patients about communicator. When sudden difficulty in breathing present migration of the communicator must be thought.

E428
Asymptomatic tracheoesophageal fistula in the adult: case report
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There are many kinds of tracheoesophageal fistula (TEF). They are usually diagnosed at the childhood, because many of them associated with esophageal atresia. H type fistula that the membranous part of the trachea is leads to the esophagus with a thin fistula is not diagnosed to the teenager or adulthood, because it is not associated with esophageal atresia. Patients having TEF, usually come to the doctor with retrosternal pain, recurrent pneumonia and recurrent bouts of coughing after drinking.
We present, a male patient having no symptom up to the adulthood with a H type TEF. Patient who had fever was hospitalized in the our clinic, with pneumonic infiltration on the PA chest X-ray graphy. Patient had bronchoscopy because TEF was seen at the thorax computerized tomography. We saw the orifice of TEF that was closed with coughing reflex, at the middle part and the posterior wall of trachea in the bronchoscopy. The esophageal opening of the fistula that was located at the 15. cm from the tooth was seen at the proximal part esophagus in the esophagoscopy. TEF is usually treated surgically at the childhood.
The most seen postoperative complication in the patients is tracheomalasia. There may be symptoms such as disphagia, esophagitis and gastroeoesophageal esophageal reflux, in the patients postoperatively, because of dismotility of esophagus. These problems can continue to the adulthood and recurrent aspirations can occur in the lungs, because of residual dysfunction of the esophagus.

E429
Respiratory symptoms – the only symptoms of achalasia
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Achalasia is an uncommon motility disorder in which a relative obstruction at the gastroesophageal junction is made worse by lack of peristaltic waves in the oesophagus. The illness affects mainly adolescents and adults.
Case report: 16 years old girl was admitted to a hospital because of atelectasis. X ray was performed by general practitioner because of prolonged productive cough and changes in physical examination - dull percussion note and decreased breath sounds in middle and lower part of right lung.
The girl has had productive cough for many years and recurrent respiratory tract infections. Her physical development was normal. She denied symptoms like difficulty of swallowing, regurgitation of food, chest pain and vomiting.
Because of atelectasis, bronchofiberoscopy was performed and revealed external compression of the right side of trachea and main right bronchus.
Contrast enhanced CT with 3 dimensional reconstruction showed typical for achalasia significant enlargement of oesophagus in posterior mediastinum compressing trachea and main right bronchus.
Surgical treatment was performed successfully.

E430
Anxiety dyspnea
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Background: Dyspnea is a common complaint in patients presenting in the primary care office. Peak incidence is between 55-69 years. 70% of the patients will have pulmonary or cardiac cause. Anxiety dyspnea is referred to patients that complain about dyspnea but no organic cause can be detected.
Aim To assess healthy patients with dyspnea without any evidence of cardiorespiratory disorder and to evaluate their perception of dyspnea and their anxiety state.
Patients and Methods: 30 patients (23F/7M), aged>18y, with dyspnea sensation with no cardiopulmonary disease, anemia, pregnancy, or obesity (BMI > 30) were recruited for the study. Spirometry, DLCO, methacholine challenge, chest X-ray, O_2 saturation, complete blood count, FT4, TSH, exercise test inspiratory muscle strength PImax), ECG, and trans thoracic echocardiography, were performed in all of them to exclude an organic cause for their dyspnea. In addition we measured their perception of dyspnea (POD), and their anxiety state using the HADS (hospital anxiety and depression scale) questionnaire.
Results: Dyspnea at rest (100%), difficulty in filling the lung (100%), the need for occasional sigh breathing (90%), and the need to yawn in order to fill the lung (80%) were the main complaints. The POD was higher than in matching healthy subjects, and the majority of them (67%) were found to have an anxiety background.
Conclusions: Anxiety dyspnea is common in patients complaining of dyspnea and without cardiopulmonary disease. Most of them are young females. Their main complain is dyspnea at rest and most of them present with the triad of difficulties in inspiration, the need for sigh inspiration and the need to yawn in order to inspire.

E431
Subglottic stenosis of trachea – a rare cause of dyspnea
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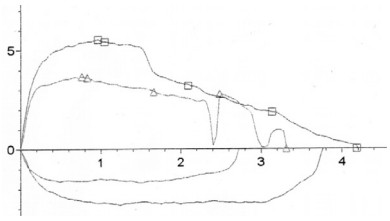
A non-smoking woman with a history of seasonal rhinitis, an appendicectomy, a gynaecologic abrasion and hiatus hernia presented with cough and exertional dyspnea. As diagnostic for exercise induced asthma, PEF values showed a decline of 18% after exercise. In the flow-volume spirometry the FEV1 was normal but the PEF value was in the lowest limit of normal values (68%) and the PIF was reduced. In the histamine challenge test the patient was noticed to have difficulties with inhaling; the results showing mild bronchial hyperresponsiveness. A suspicion of upper airway obstruction was raised and the patient was sent to the otolaryngologist. There on the examination and in the CT scan an obstruction below the vocal cords was detected. The patient was managed with a laser submucosal resection. Later, the condition deteriorated again. This time examination revealed wheezing expiratory sounds and the patient was sent to the otolaryngologist to confirm the subglottic restenosis. The patient received a tracheostoma the next day and later, she underwent a laryngeal resection.



Tracheal stenosis is a known complication of a prolonged intubation and can appear after quite a long time period after intubation (Dikkers 2001) Also, stenosis may be difficult to reveal when medical history of a patient does not include a prolonged operation. In addition, a gastroesophageal reflux disease has been proposed to predispose to a subglottic stenosis (Maronian 201, Stevens 2002).

E432
Descriptors of dyspnoea in patients with idiopathic hyperventilation (IHV): a comparison with organic lung disease
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We have previously found that patients with IHV have comparable impairment of health status to patients with severe COPD, despite having normal lung function. Whether IHV patients use the same terms to describe their dyspnoea as those with obstructive and restrictive lung disease is not known. We aimed to evaluate the experience of breathlessness using verbal descriptors in moderate to severe asthmatic, COPD, idiopathic pulmonary fibrosis (IPF) and well-characterised IHV patients.
160 postal questionnaires, comprising 45 questions (Elliott, 1991) about descriptors of breathlessness on exertion. 100 responses (24 asthma, 26 COPD, 24 IPF, 26 IHV) were analysed using principal components analysis with varimax rotation (exploratory factor analysis). Initial analysis was blinded to the 4 groups.
The analysis suggested 3 dimensions of breathlessness, explaining 66.3% of the variance (KMO=0.917, Bartlett's p=<0.001).
1: unpleasant sensations in the chest (32.3%); 2: air hunger (21.3%); 3: wheeze (12.7%). There were no significant differences between the factor scores for unpleasant sensations in the chest or wheeze for the four diagnoses (ANOVA p=0.25 and 0.51 respectively). Air hunger scores however were significantly higher for IPF, than for the other groups (p=0.04)
Patients with IHV characterised their breathlessness using the same terms as those with abnormal lung mechanics. Air hunger was predominantly reported in the IPF group, possibly reflecting an increased respiratory load to breathing. These data confirm the burden of symptoms experienced by IHV patients and support the need for further understanding of the aetiology and treatment of this poorly understood disorder.

E433

Is compliance with ICS treatment increased when a MDI canister with audible and visual reminder functions is used?

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Aims: An inexpensive electronic device has been developed, which provides an audible and visual reminder, as well as an accurate covert time/date log of inhaler use. The audible reminder beeps twice a day for one hour until a dose is taken, and the visual reminder flashes a different colour depending on whether a dose has been taken in the previous 6 hours. The aim of this study was to assess whether an inhaler with these functions increases compliance.
Methods: This was a randomized, open-label, parallel group, single centre study. 110 subjects who were prescribed inhaled corticosteroid but not long-acting beta-agonist, received a 24-week treatment period of fluticasone propionate 250mcg bd, via MDI, with covert compliance monitoring. Subjects were randomised to groups with and without the audiovisual reminder. Subjects were assessed at 0, 6, 12, 18 and 24 weeks. At these visits, compliance data was discretely downloaded. Subjects were not informed that they are undergoing covert compliance monitoring.
Results: For the primary outcome, the proportion of medication taken over the last 12 study weeks, the median compliance for the reminder group was 93% (IQR 88 to 97) and for the non-reminder group 74% (IQR 49 to 88). The absolute difference expressed as a percentage by the Mann-Whitney test was 18% (95% CI 10 to 26), $P<0.0001$. The relative risk of compliance being over 80% for the reminder group versus the non-reminder group was 2.3 (95% CI 1.6 to 3.3, $P<0.0001$) and for 90% compliance it was 3.3 (95% CI 1.7 to 6.1, $P<0.0001$).
Conclusion: The use of an inexpensive electronic device with audible and visual reminders significantly increased compliance in patients with asthma.

E434

A novel, standardised questionnaire for assessing the determinants of the patient's preference for a dry powder inhaler (DPI): the validation of the handling questionnaire

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The ability to use inhaler devices effectively represents a crucial point in managing chronic airway obstruction, and it can largely depend on the patient's skill, ability, and psychological profile.
Aim: to implement and validate a novel international questionnaire for assessing the determinants of the patient's preference for a DPI.
Methods: the questionnaire consisted in 25 items: 2 were demographic; 4 checked the patient's previous experience with DPIs; 8 assessed the patient's attitude in understanding and practicing the operational instructions for a correct DPI actuation; 11 measured the subjective aspects of his choice. Instructions were delivered by a specialist nurse for each tested device. The first version was distributed to a pilot testing group of 22 subjects (matched for sex, age, and cultural level) who checked the comprehensibility and the logic sequence of the items. The Italian and the English versions of the questionnaire were obtained according to the translation and the back-translation procedure.
Results: The pilot test confirmed the good comprehensibility of the questionnaire at the first reading:100% for 20 items; and 95%, 91%, 82%, 68%, 55% for the remaining five, respectively. Following the changes suggested, also these five items reached a 96-98% comprehensibility.
Conclusions: the Handling Questionnaire (HQ) represents a novel and standardised tool for investigating and assessing the patients' determinants in DPIs choice.

E435

Inhaler therapy in obstructive airways disease (OAD): prescription, compliance and technique

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Setting: University hospital chest clinic, Karachi, Pakistan.
Objectives: To study the prescription, compliance, and inhaler technique of patients with asthma and COPD.
Methods and Results: 98 patients aged ≥12 who were using an inhaler for ≥6 months, underwent a questionnaire-based interview, medical records review & direct observation of inhaler technique (8 steps). Diagnosis of asthma or COPD was based on medical records. Mean age was 47 yrs. 51% were males. 76% had asthma & 24% COPD. 34% were smokers or ex-smokers. The commonest prescribed drugs were salbutamol (58%) and salmeterol/fluticasone combination (56%). Inhaled corticosteroids (ICS) were prescribed in 85% asthmatics & 65% patients with COPD. There was a higher trend in prescribing ICS among younger patients in both groups with no sex discrimination. 65% reported total compliance in the preceding 6 weeks. Common reasons for non-compliance were, feeling better (32%) & forgetfulness (19%). 53% were prescribed a spacer device & 70% admitted using it every time. Only 34% used a metered-dose inhaler (MDI) correctly. 87% used the MDI-spacer combination correctly. The most frequent errors with a MDI were failure to coordinate actuation/inhalation (40%) and inadequate breath-hold (42%). When a MDI+spacer was used, inadequate breath holding (57%) & failure to inhale deeply (52%) were the weakest steps.
Conclusion: In patients with OAD, inhaled short & long-acting beta2 agonists along with ICS were the most frequently prescribed drugs. Improvement in symptoms most commonly lead to non-compliance. Simple MDIs were used correctly by only one third of the patients, where as the MDI-spacer combination was satisfactorily used by the majority.

E436

Electrolytes distrurbance: the effect of different forms of B-stimulants

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Purpose: To determine the electrolyte disturbances in chronic stable asthma patients receiving outpatient therapy including different forms of beta stimulants.
Methods: Consecutive out patients with chronic, stable bronchial asthma. Once diagnosed patients were subjective full clinical data collection including: age, gender, duration of asthma, severity of illness, details of therapy, and serum levels of potassium, sodium, calcium, and magnesium were measured.
Results: Sixty consecutive patients with chronic, stable airway obstruction of bronchial asthma were included in the study.Age 37.7±12.8 and females were 53.3% of patients. Electrolyte disturbances were found in 58.3% of patients; of those patients 51.4% had one electrolyte disturbance, 31.4% had two electrolytes disturbance, and 17.1% had three electrolyte disturbance. The majority (45%) had lower potassium levels, followed by magnesium in 31.7% of patients. Lower incidence of hyponatremia was found in 18.3% of patients. We did not found hypocalcemia in those patients. Logistic regression analysis showed statistically significant correlation between inhaled steroids and the presence of electrolyte disturbance. Beta long acting inhalers were associated with significant correlation for hypokalemia, the use of theophyline was significant for the presence of hypomagnesmia.
Conclusion: Hypokalemia and hypomagnesemia were the most common electrolyte disturbance in patients with chronic, stable bronchial asthma. Inhaled steroids and beta agonist seems to have an effect on the electrolytes serum levels. Mechanisms need to be clarified.
Clinical implications: The use of different inhalers should be carefully monitored in patients with long term therapy.

E437

Comparison of midazolam and ketamin premedication in children undergoing flexible fiberoptic bronchoscopy under mask anesthesia

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Premedication with sedatives eases separation from the family, acceptance into the operating room and application of anesthesia therefore increasing patient comfort. The aim of this study was to compare the effect of midazolam and ketamin in premedication before mask anesthesia in children undergoing flexible fiberoptic bronchoscopy (FFB).
Thirty-five patients who underwent diagnostic or therapeutic FFB between September 2003 and December 2005 were included in the study. Midazolam (0.03 mg/kg/dose) was administered intranasally to 21 patients (mean age ± standard deviation (SD) 6.93 ± 1.22) and ketamin (0.05 mg/kg/dose) was administered to 14 patients (mean age ± SD 4.52±1.07) 30-50 minutes before initiation of anesthesia. Buttner- Brietkopf and comfort scales were evaluated before premedication, 20 minutes after premedication and after FFB.
Mean Buttner-Breitkopf scale results before premedication, after premedication and after bronchoscopy for Ketamin and Midazolam groups were 1.85, 2.07, 2.4 and 1.8, 2.26, 2.3 respectively. Comfort scale results after the premedication were 24.2, and 19.5; those after the bronchoscopy were 22.9, and 20.6 for ketamin and midazolam groups respectively ($p>0.05$).Complication rates were 42% and 21% in ketamin and midazolam groups respectively. Evaluation of the amnestic effect of the agents revealed that none of the patients remembered the initiation of the anesthesia.
In conclusion, premedication with ketamin or midazolam has easy applicability and amnestic influence.They eased bronchoscopy and increased patient comfort before FFB. Drug choice need to depend on medical characteristics of patients.

E438

The effect of European working time directive (EWTD) upon higher respiratory training in West Yorkshire

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Background: There is concern that reduction in junior doctor's hours, imposed by

EWTD, impacts upon specialist training. Calculations based upon rotas suggest a negative impact; little evidence exists to demonstrate this.
Methods: Bronchoscopy training was selected as a marker of specialist training, to study. A comparison was made of the number of bronchoscopies performed by Specialist Registrars (SpRs) in the periods October 2002-2003, and October 2004-2005. The change to EWTD compliant rotas occurred in the intervening year. Data was collected from a teaching hospital and a District General Hospital (DGH) within the Yorkshire Deanery. The teaching hospital rota changed from a 3 month general medicine partial shift to full shift, with the DGH changing from 1 in 6 rota to 1 in 8 full shift. The teaching hospital SpR continue to spend 9 months each year on a speciality on call rota. Evening educational sessions were changed to full day events.
Results: Both hospitals showed a reduction bronchoscopy list attendance, and procedures performed by SpRs. The greater reduction being in the DGH (45% vs.9% lists; 55% vs. 16% procedures).

Teaching Hospital

Year	2002-2003	2004-2005
Number of lists	181	182
Number of lists missed by SpRs	29	43
Total number of procedures	521	455
Procedures performed by SpRs	395	330

3 SpRs

District General Hospital

Year	2002-2003	2004-2005
Number of lists	45	45
Number of lists missed by SpR	14	28
Total number of procedures	145	134
Procedures performed by SpR	85	38

1 SpR

Conclusions. EWTD compliant rotas reduce speciality training opportunities; this may be compounded by further time limits in 2009.

E439
Endoscopic sanation of tracheobronchial tree for the widespread bronchiectasia, which is combined with syndrome cartagenera (SC). Case report
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Aim: validity of injection of medical products for the bronchial sanation (BS).
Supervision: the pt of 18 years has been accepted with complaints to cough with sputum, rising body temperature, dyspnea and frequent aggravations of disease. At receipt to the pt the following diagnostic studies have been carried out: the CT of lungs, X-ray of the chest, spirography, sputum for microbiological investigation and antimicrobial drugs susceptibility were obtained.
The diagnosis was established: bronchiectasia with localization of plural bronchiectasises in the bottom lobes of both lungs.
SC: The diagnostic bronchoscopy established: diffusive inflammation of the mucous membrane, the gleams of bronchial tubes had 3-4 orders were filled the dense purulent sputum. FEV1 - 65%, FVC - 78%. On a background of the basic therapies (gatifloxacin and mucolytic), BS with endobronchial injection of antibiotics were performed to the pt. BS have been carried out by means of device of the "Olympus" (Japan) BF type TE every other day.
On the 4 day of the treatment the patient's body temperature was normalized, dyspnea and cough have considerably decreased. In 12 days, after repeated the spirogramm, the parameters FEV 1 have grown on 25%, FVC on 18%, material has not given growth at sowing of sputum on microflora. The patient was discharged with improvement in 12 days after the beginning of treatment.
Results: the performance of endobronchial sanations with the injection of the antibiotics considerably reduced terms of stay in a hospital also reduced duration of the antibiotic therapy.

E440
Relationship between nutritional and clinical status in adult cystic fibrosis patients
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The aim of the study was to analyze nutritional status of cystic fibrosis (CF) adults and assess the relationship between indicators of nutritional and clinical status in this group of patients.
Methods: The group of 30 CF patients, mean age 24,6yrs, was studied: 20 females and 10 males. Patients were grouped according to presence or absence of malnutrition. Body mass index (BMI) was used to single out the groups: normal weight-N (n=14) with BMI>20; malnourished patients-M (n=16) with BMI<=20. The severity of disease was determined by the results of spirometry (FEV1% and FVC%) and microbiological review. The presence of *Pseudomonas aeruginosa* (PS) in respiratory specimens allowed to single out PS-positive (n=19) and PS-negative (n=11) groups.
Results:
1. Malnutrition was established in 16 (53,3%) patients, 13 females (81,2%) and 3 males (18,8%);
2. 19 patients was chronically infected with *Pseudomonas aeruginosa* (63,3%), 14 females (73,7%) and 5 men (26,3%);
3. Patients with malnutrition had significantly lower mean values of FEV1 and FVC.
4. Statistical analysis revealed that FEV1 value was related to malnutrition (r=0,44, p<0,05), as well as *Pseudomonas aeruginosa* colonization and sex.
5. *Pseudomonas aeruginosa* infection was also associated with decreased pulmonary function.
6. Statistically significant correlations were found between patients age and BMI (r=0,40 p<0,05) but inversely there was no correlation between patients age and FEV1 (r=-0,03)
Conclusions: The data emphasize the close relationship between nutritional status, lung function and bacterial colonization in CF. Normal body weight and absence of PS infection was associated with better lung function.

E441
Serum lipid concentrations and malnutrition in adult cystic fibrosis patients
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The aim of the study was to determine the correlation between selected lipid serum concentrations and malnutrition indicator in adult cystic fibrosis (CF) patients.
Methods: Total cholesterol and triglycerides were measured in serum of 30 adult CF patients, mean age 24,6yrs: 20 females and 10 males. Patients were grouped according to the presence or absence of malnutrition. Body mass index (BMI) was used to single out the groups: without malnutrition -N (n=14) with BMI>=20; malnurished patients-M (n=16) with BMI<20. All subjects had also assessment of body composition by Bodystat 1500 (body fat, lean body mass and total body water).
Results: Serum concentrations of cholesterol and triglycerides did not correlate significantly with sex but higher concentration were obtained in females. The mean concentration of cholesterol and triglycerides in females was 3,89mmol/L and 1,07mmol/L and in males 3,27mmol/L and 0,80mmol/L respectively. Concentrations of cholesterol and triglycerides were not related to body mass index (r=0,04 and r=-0,15, respectively) Correlation between cholesterol, triglycerides and the body fat mass were positive (0,34 and 0,23 respectively) but they were not statistically significant.
Conclusions: There are no correlation between cholesterol, triglycerides serum levels and malnutrition. It is suggested that these parameters could not be used in clinical practice for nutritional assessment and it is the challenge to look for other biochemical parameters of malnutrition.

E442
Turbohaler vs novolizer: the determinants for the patient preference as assessed by a novel, validated questionnaire – the handling questionnaire. Preliminary results
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The patient preference is one of the selecting criteria for aerosol devices: even though difficult to assess, it can highly affect the therapeutic effectiveness.
Aim: to assess and compare the determinants of the patient's choice between two DPIs: Turbohaler (T) and Novolizer (N).
Methods: 152 patients, matched for age, sex, and experience with DPIs were requested to give their preference for one device on the basis of the Handling Questionnaire, a novel specific tool of investigation (25 items), recently validated.
Results: N was the device which appeared easier to use (79% respondents): it needs less manoeuvres (2); it is rechargeable; it is more handy were the most frequent answers. These results was not affected by age, sex, and previous DPI experience. The most frequent criticism of T were the higher n. manoeuvres: 97% patients needed only 1 attempt to correctly actuate N and 88% T. While it occurred independently of age and sex with N, T was correctly used at the 1st attempt only by young males 16-34y. Finally, while T was preferred in terms of weight and height, N was preferred for managing (96% respondents); in terms of ease of use and of coordination needed to actuation (both 86%), of awareness of residual doses (83%), of ease of gripping (59%).
Conclusions: 1) Novolizer proved the DPI with the highest patient's preference; 2) the determinants of choice proved mainly attaining to aspects linked to the effectiveness of actuation and handling than to curiosity or aesthetic perceptions; 3) when n. of manoeuvres for the correct actuation is higher (>2), age and sex can represent significant critical points.