Results: This approach resulted in a significant enhancement of the quality of care criteria analyzed:

<table>
<thead>
<tr>
<th>Documented in the medical record</th>
<th>Before (n = 115)</th>
<th>After (n = 93)</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recent focus of the disease</td>
<td>79 (65%)</td>
<td>88 (75%)</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Presence of follow-up</td>
<td>52 (45%)</td>
<td>72 (65%)</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Randomization</td>
<td>15 (35%)</td>
<td>44 (60%)</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>PEFR before treatment</td>
<td>22 (19%)</td>
<td>82 (88%)</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>PEFR after treatment</td>
<td>8 (7%)</td>
<td>77 (93%)</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Steroid therapy</td>
<td>56 (50%)</td>
<td>71 (76%)</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Follow-up after ED discharge</td>
<td>1990 (21%)</td>
<td>3347 (74%)</td>
<td>&lt;0.001</td>
</tr>
</tbody>
</table>

Discussion and Conclusion: Implementation of locally developed guidelines with the participation of all healthcare personal was time consuming but had a significant impact on the ED management of asthma patients. This program should be continued to even further increase the quality of patient care. The impact on clinical outcome is currently being assessed.

P1286

Undertreatment in asthmatic outpatients with mild bronchial obstruction

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Undertreatment is one of the reasons for symptoms, sleep disturbance and limitation of activities in asthmatics. Inhaled anti-inflammatory drugs, in particular steroids, are very effective in controlling asthma symptoms in patients of all ages and severity.

The aim of our study was to evaluate, in asthmatics with mild bronchial obstruction, the difference between the domiciliary treatments carried out by outpatients (Opt) and that prescribed by the specialists (SpS) based on the severity of symptoms referred.

A retrospective study of 112 consecutive Opt (51 males, 61 females; mean age: 29 yrs; range: 13-63) with 6% p FEV1 > 70 (mean: 98%; range: 70-132%) was performed.

The patients’ histories and disease severity score in the previous four weeks (DSS) were investigated and the therapy (level 0-4) used by the Opt and prescribed by the SpS was compared.

SpS’ rank correlation was used for nonparametric data. Only 6 out of 112 (5%) Opt did not report symptoms of asthma (DSS equal to 0) after domiciliary treatment.

We found a significant difference between the therapy used by Opt at home and that prescribed by the SpS (median: home therapy: 0.5; SpS = 2; p < 0.0001, Wilcoxon test), even if a correlation did exist between them (r = 0.39, p < 0.0001).

The total DSS was not associated with the therapy used by the Opt, unlike that of the SpS (r = 0.24, p < 0.001).

We found a significant correlation between the domiciliary therapy and day symptoms only (r = 0.20, p < 0.03) and shortness of breath due to exercise (r = 0.19, p < 0.04); on the contrary, there was significant correlation between SpS’ therapy and day symptoms (r = 0.22, p = 0.01), shortness of breath due to exercise (r = 0.23, p < 0.01) and also night symptoms.

In conclusion, in asthmatics with mild bronchial obstruction: 1) the treatment used by the Opt at home is different from that prescribed by the SpS and their treatment level is indicated by the severity of day symptoms and shortness of breath (exercise); 2) the anti-inflammatory therapy is not used regularly, therefore the right symptoms are probably still present.

P1287

Non-participation in early intervention with inhaled steroids in asthma and chronic obstructive pulmonary disease (COPD): The role of ‘fear of steroids’.

Results of the ‘DIMCA’ study

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Treatment of chronic airflow obstruction with inhaled steroids at an early stage has shown to preserve the lung function. However, long-term treatment with inhaled steroids may cause local and systemic adverse effects. We tested the hypothesis that ‘fear of steroids’ may be an important reason of non-participation in the ‘DIMCA’ project. Therefore, early Intervention and Monitoring program on COPD and Asthma. 1749 Randomly selected asthmatic patients were invited to a screening program to detect asthma or COPD. 604 Subjects were selected on the basis of the presence of bronchial obstruction, reversibility of obstruction and bronchial symptoms. After a two-year monitoring period 24 patients with an increased lung function decline or bronchial hyperresponsiveness were invited to participate to an early intervention trial with inhaled steroids. Non-participants were sent a questionnaire about the reasons of non-participation. Together the screening, monitoring and intervention part of the study showed on average 28% non-participants. The most frequent reason for non-participation was a general resistance to take medication daily (50% of the non-participants of the intervention trial). Remarkably, a specific ‘fear of steroids’ was a reason for denial in only 8.6% of these non-participants. It was concluded that ‘fear of (inhaled) steroids’ seemed not to be an obstacle for early treatment of asthma and COPD.

P1288

The clinical control of asthma after adding airway hyperresponsiveness (AHR) to the polyclinic of long-term AHR: A two-year randomized trial

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According to present guidelines (GINA), the level of anti-inflammatory treatment for asthma is solely based on symptoms and lung function. In a randomised parallel design we investigated whether a treatment strategy aimed at reducing AHR (strategy B) on top of improving symptoms, FEV1 and peak flow (PEF) variability (strategy A) leads to more effective control of 15 non-smoking adults with mild to moderate asthma (18-50 yr; 23 newly detected; FEV1; mean ± SD): 92 ± 15% predicted visited the chest physician, every 3 months during 2 yrs. Prior to each visit, methacholine PC20 (baseline: geom. mean ± SD: 0.63 mg/ml ± 2.11) was assessed and the subjects received antihistamines, β2-agonist usage and morning + evening PEF on a diary card, during 14 days. At each visit, in both strategies, controller medication with inhaled corticosteroids and/or prednisone (4 levels: no steroids, 400, 800, 1600 μg/day+2 x wk prednisone) was adjusted according to a stepwise approach similar to GINA, and to which 4 corresponding classes of AHR were added. In 62% of all instances, AHR-class indicated the need for an increased medication level, which was only applied in strategy B. Improvements in FEV1 and morning PEF (% personal best) were more pronounced in strategy B vs A (B: 5.0 ± 9%, 90% and A: 0.18% ± 3.5%, respectively; p < 0.05).

The exacerbation rate was 2.2 times lower in strategy B vs A (Cox regression: p = 0.05). Furthermore, individual standard deviations over the last 1.5 yr for FEV1% predicted, morning PEF, PEF-variability and PC20 were smaller in strategy B vs A (MANOVA: p < 0.05). We conclude that a treatment strategy aimed at reducing BHR on top of improving symptoms, FEV1 and PEF-variability leads to more effective control of asthma, resulting in fewer exacerbations and less variable airflow limitation. This implicates a role for monitoring AHR in the long-term management of asthma.

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