

学位論文の要旨

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学位論文名 Comparison of Clinical Management of Young and Elderly Asthmatics by Respiratory Specialists and General Practitioners

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論文内容の要旨

INTRODUCTION

The increase in the number of asthmatics in recent decades has become a serious public health problem worldwide. It is estimated that about 250,000 people per year die of asthma worldwide. Therefore, asthma-related death, hospitalization, and emergency visit impose enormous social and economic burdens. In Japan, the prevalence of asthma and related mortality rate are higher than in other developed countries, making asthma one of the major social problems. In many countries, the majority of asthma-related deaths involves elderly patients (≥ 65 years).

Physician's skill is an important aspect of asthma control. Since asthma is a common disease, not only respiratory specialists (RS), but also general practitioners (GP) should be involved in the treatment of patients, with the exception of intractable cases. However, some studies have reported that GPs lag behind RS with regard to the management of asthma.

The aim of the present study was to compare management of young and elderly asthmatics provided by RS and GP.

MATERIALS AND METHODS

A cross-sectional survey was carried out in Shimane, Japan, in February 2009 using a questionnaire about patient background, treatment, asthma control test (ACT) and adherence to

treatment. We secured the cooperation 48 clinics (39 private clinics, 9 general hospitals).

The treatment type was categorized according to the type of controller medication. Controller medications included regularly used inhaled corticosteroids (ICS), long-acting beta agonists (LABA), ICS/LABA fixed combinations, theophylline, leukotriene receptor antagonists (LTRA) and oral corticosteroids. The treatments were classified into five steps according to the Global Initiative for Asthma (GINA) 2009 guidelines.

We divided asthma patients into two groups according to age; the elderly group, consisting of patients aged ≥ 65 years, and the young group (< 65 years). Furthermore, we divided the patients according to the specialty; the RS group comprising patients who visited the clinic or hospital for treatment by RS, and the GP group comprising patients who visited the clinic or hospital for treatment by GP.

We used the Japanese version of the ACT to evaluate asthma control. The ACT is a five-item questionnaire to assess asthma control in the 4-week period preceding visit to the clinic (Question1: restriction of activity, Question2: shortness of breath, Question3: night symptoms, Question4: use of rescue inhaler, Question5: self-assessment). The sum of the scores of the five questions yields the total ACT score (range, 5-25). The total ACT score of 25 represents complete control of asthma, 20-24 good control, and < 20 represents poor control. In this study, we defined the total ACT score of ≥ 20 points as high score and < 20 points as low score.

We examined the frequency of forgetting to take medications and nonuse for each of the inhalants, oral agents and patch agents per week.

The study protocol was approved by the Ethics Committee of Shimane University and written informed consent was obtained from all subjects.

RESULTS AND DISCUSSION

Characteristics of study patients

Clinical data of 779 patients were available for analysis. Elderly patients constituted 464 (RS group: 192, GP group: 272), while those of the young group were 315 (RS group: 207, GP group: 108). The use of ICS was significantly higher among the elderly and young RS group than the GP group. Based on the treatment steps of the GINA 2009 guidelines, the majority of patients of the RS group were classified as step 3 or 4, whereas the majority of patients of the GP group were classified as step 1, 2 or 3.

Asthma control test

The proportion of patients with high score was significantly higher in the young RS group compared with the young GP group. However, no such difference was found between the elderly RS and their counterpart of the GP group.

In each question of ACT, the score for Q2 was significantly lower in the elderly GP group than the elderly RS group. The scores for Q1 and Q3 were, however; not significantly different

between the two groups. The scores for Q1, Q2 and Q3 were significantly lower in the young GP group compared with the young RS group. Patients of the young GP group had more asthma-related symptoms than those of the young RS group. For Q4, elderly patients of the GP group used inhalers of short-acting beta-stimulators to relieve asthma-related symptoms significantly fewer times than elderly patients of the RS group. With regard to Q5 about self-assessment of asthma, the score was significantly higher in elderly patients of the GP group compared with their counterparts of the RS group. In contrast, the score was higher in the young RS group than the young GP group.

Adherence to treatment

There were no significant differences between the elderly and young patients of the RS and GP groups with regard to the use of each inhalant, oral and patch agents. However, comparison of the elderly patients (including the RS and GP groups) and young patients (including the RS and GP groups) showed significantly better adherence to the treatment by the elderly patients than the young patients for each inhalant, oral agent and patch agent.

Discussion

Elderly patients treated by GP felt more shortness of breath than elderly patients treated by RS (response to Q2). However, elderly patients treated by GP self-assessed their ACT with higher score than elderly patients treated by RS (response to Q5). It is possible that elderly patients managed by GP tended to underestimate the severity of their asthma condition. Furthermore, elderly patients managed by GP less frequently used rescue inhalers to relieve asthma-related symptoms compared with elderly patients treated by RS (response to Q4). Also, in young patients treated by GP, the frequency of use of rescue inhalers was similar with those treated by RS, although young patients seen by GP had clearly more asthma-related symptoms than those treated by RS. We speculate that these results were related to insufficient prescription of rescue inhalers and insufficient instructions by GP. The results of GP for Q4 and Q5 might overestimate the total ACT score especially in the elderly GP group. Because the treatment step in many of the patients of the GP group was low despite the multitude of asthma-related symptoms, many patients of the GP group were probably undertreated and required step-up treatment.

We speculate that these differences were related to inappropriate education and insufficient clinical skills by GP

CONCLUSION

Elderly asthmatics treated by GPs underestimated the severity of their asthma and asthmatics seen by GPs were undertreated. The results stress the need to engage patients in educational activities, to adhere to guidelines, and to improve the coordination between GP and RS.