

Original Article

Questionnaire Survey on Asthma Management of Japanese Allergists I. Diagnosis, patient education and management

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ABSTRACT

A questionnaire on asthma management was sent to 586 physicians, consisting of specialists authorized by the Japanese Society of Allergology and councillors of the Society, who were treating patients with bronchial asthma. Of the total of 306 (52%) respondents in November 1993, 241 replied to questions relating to adult asthma and 129 to questions relating to childhood asthma (including duplicate replies).

Responses to the questionnaire on the diagnosis, patient education and management of asthma indicated that a reduced number of patients with severe asthma were seen in 1993 in both Pediatric and Internal Medicine Departments compared with 5 years before, despite the increase in total number of asthma patients in Japan. Specific IgE radioallergosorbent test (RAST) measurements were frequently performed instead of skin testing for diagnosis, and eosinophil count and bronchodilator response served as an adjunct to the diagnosis. Patients were frequently asked detailed questions about aspirin-induced asthma, which accounted for 8.8, 2.2 and 1.5% of patients with asthma in the adult, schoolchildren (6–16 years) and infant (≤ 5 years) groups, respectively. In achieving 'control of asthma', first priority was given to coping with the symptoms in children aged 5 years or less and to enabling routine daily life activities in

patients 6 years of age or older. Usefulness of peak flow measurements was widely recognized and a detailed plan for allergen avoidance (house dust) was often given to patients.

Key words: asthma management, bronchial asthma, Japan, questionnaire survey

INTRODUCTION

The Bronchial Asthma Group of the Comprehensive Research Project on Allergy of the Ministry of Health and Welfare conducted a questionnaire survey in November 1993 to examine the current status of asthma management in Japan.

The questionnaire comprised questions relating to *The Guidelines on Diagnosis and Treatment of Asthma* of the Japanese Society of Allergology (1993),¹ and the diagnosis, patient education, management and treatment of asthma by physicians treating asthma patients.

The results of this questionnaire have already been reported.² In this paper, the results of the questionnaire survey on the diagnosis, patient education and management of asthma are reported.

METHODS

A questionnaire was sent to 586 physicians, including specialists authorized by the Japanese Society of Allergology and councillors of the society, who treated patients with asthma (Table 1). Of the total of 306 (52%) respondents, 177 were internists, 65 were pediatricians and 64 were physicians who saw patients in

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Table 1 Subjects and methods

Subjects:	586 physicians consisting of specialists authorized by the Japanese Society of Allergology and board members of this Society who examined adult asthma and/or pediatric asthma.
Methods:	Questionnaires on asthma management were sent and corrected for analysis.
Response rate:	52% (306 respondents)
Breakdown of the respondents:	1) Answered questionnaire on childhood asthma only 65 (21.2%) 2) Answered questionnaire on adult asthma only 177 (57.8%) 3) Answered both questionnaires 64 (21.0%) Childhood asthma: 129 Adult asthma: 41

Table 2 General information

1) In what year did you start your practice as a specialist?	18.8±10.0 yrs (Mean±S.D.)		[Duration of practice]
2) Do you specialize in:			* Respondents who checked the only one speciality
	respiratory medicine?	40.8%	(23.5)*
	general internal medicine?	14.4%	(6.2)
	allergy in internal medicine?	34.3%	(16.0)
	general pediatrics?	10.5%	(2.6)
	pediatric allergy?	28.4%	(19.3)
	allergy?	7.8%	(1.6)
	No answer	0.7%	
3) Within the total number of asthma patients, regularly followed by you, what percentage do you estimate to be within the following age ranges? (give %)			
	1-5 yrs	35.0%	
	6-16 yrs	25.4%	45-65 yrs 35.4%
	17-44 yrs	28.7%	over 65 yrs 19.4%
4) In your practice, are you seeing more patients with severe asthma than 5 years ago?			
	yes	no	not applicable or don't know
	19.9%	71.9%	6.5%
			No answer
			1.6%
5) In your practice, are you seeing more asthmatic patients than 5 years ago?			
	yes	no	not applicable or don't know
	68.0%	24.5%	5.6%
			No answer
			2.0%
6) Are you familiar with "The U.S. NIH International Consensus Report on Diagnosis and Management of Asthma" issued in 1992, guidelines on asthma management, which was drafted by members of the International Asthma Management Project?			
	yes	no	No answer
	96.1%	2.9%	1.0%
6.1) Do you know the contents?			
	yes	no	No answer
	92.8%	5.9%	1.3%

Table 3 Diagnosis

1) In your diagnostic work-up of asthma, please give the frequency you utilize or request each test

	Never	Sometimes	Often	Always	No answer
a) allergy testing - skin test	<u>24.8%</u>	<u>24.2%</u>	<u>16.3%</u>	<u>28.4%</u>	<u>6.2%</u>
- specific IgE (RAST)	<u>0.7%</u>	<u>4.9%</u>	<u>14.1%</u>	<u>76.5%</u>	<u>3.9%</u>
- serum total IgE (RIST)	<u>1.3%</u>	<u>3.6%</u>	<u>9.8%</u>	<u>81.7%</u>	<u>3.6%</u>
b) blood eosinophilia	<u>1.3%</u>	<u>3.3%</u>	<u>10.5%</u>	<u>81.4%</u>	<u>3.6%</u>
c) test of response to bronchodilators	<u>32.0%</u>	<u>26.5%</u>	<u>19.9%</u>	<u>17.0%</u>	<u>4.6%</u>
d) airway hyperresponsiveness test (histamine, methacholine, etc.)	<u>41.5%</u>	<u>29.4%</u>	<u>15.7%</u>	<u>9.5%</u>	<u>3.9%</u>
e) provocation test by allergen inhalation	<u>74.5%</u>	<u>18.3%</u>	<u>2.6%</u>	<u>0.7%</u>	<u>3.9%</u>
f) trial course of oral steroids	<u>64.7%</u>	<u>24.8%</u>	<u>5.6%</u>	<u>0.7%</u>	<u>4.2%</u>

2) How often do you ask your asthmatic patients to fill out a detailed questionnaire on potential risk factors present in the work place?

Never (7.8%) Sometimes (13.7%) Often (22.9%) Always (45.4%) No answer (10.1%)

2.1) How often, in your experience, is asthma occupational? Please indicate actual percentage?

0-10% (65.4%) 11-20% (3.6%) 21-30% (0.7%) No answer (30.4%) 5.9±51.3% (Mean±S.D.)%

3) How often do you ask your asthmatic patients to fill out a detailed questionnaire on potential risk factors present in school?

Never (8.2%) Sometimes (21.9%) Often (23.2%) Always (40.8%) No answer (5.9%)

4) How often do you ask your asthmatic patients to fill out a detailed questionnaire on potential risk factors present at their home environment?

Never (0.7%) Sometimes (9.2%) Often (24.8%) Always (65.0%) No answer (0.3%)

(ALMOST)	NEVER	(<10%) = 0
	SOMETIMES	(10-50%) = 1
	OFTEN	(50-90%) = 2
(NEARLY)	ALWAYS	(>90%) = 3

5) How often do you ask your patients with aspirin-induced asthma to fill out a detailed questionnaire?

	Never	Sometimes	Often	Always	No answer
adult	1.3%	7.0%	17.5%	72.9%	1.3%
6-16 yrs	18.8%	31.6%	16.2%	28.2%	5.1%
≤ 5 yrs	40.2%	27.4%	12.8%	12.8%	6.8%

5.1) What percentage of your patients have aspirin-induced asthma? Indicate the actual percentage.

	-2%	3-6%	7-10%	11-20%	21-30%	No answer
adult	<u>14.4%</u>	<u>24.5%</u>	<u>37.5%</u>	<u>12.3%</u>	<u>2.6%</u>	<u>8.7%</u>
	8.8±63.1	(Mean±S.D.)%				
6-16 yrs	<u>29.9%</u>	<u>12.8%</u>	<u>0.9%</u>	<u>0%</u>	<u>0%</u>	<u>56.4%</u>
	2.2±19.1	(Mean±S.D.)%				
≤ 5 yrs	<u>12.8%</u>	<u>1.7%</u>	<u>0%</u>	<u>0%</u>	<u>0%</u>	<u>85.5%</u>
	1.5±13.4	(Mean±S.D.)%				

both medical and pediatric departments. A total of 241 replied to the questions relating to adult asthma and 129 to those relating to childhood asthma. In the questionnaire, all patients with bronchial asthma were classified into three age groups: adults (>16 years), children (6-16 years) and infants (≤5 years).

The relevant questions are shown in Tables 2-4. The following instructions were given in the preamble of the questionnaire.

Your answers to questions should reflect your actual management of individual patients. Please answer these questions using the following scores for approximate frequencies, from 0 to 3: (Almost) Never (<10%)=0; Sometimes (10-50%)=1, Often (50-90%)=2 and (Nearly) Always (>90%)=3

Table 4 Patient education and asthma management

- 1) Among the criteria for achieving "control of asthma", what is your order of priority in the majority of patients in each of the following age categories?

	(first priority = 1)			
	≤5 yrs	6-16 yrs	17-44 yrs	≥45 yrs
Minimal symptoms	2 (33.3%)	2 (28.2%)	3 (30.1%)	2 (29.7%)
Allowing normal activity of daily living	2 (33.3%)	1 (43.6%)	1 (51.5%)	1 (47.2%)
Normal air flow rates (FEV ₁ or PEF)	4 (50.4%)	4 (41.9%)	4 (48.9%)	4 (51.1%)
Coping with symptoms	1 (42.7%)	3 (23.9%)	2 (25.8%)	3 (23.6%)

- 2) During a first session how often do you spend more than 15 minutes educating your patients about their disease and its treatment?

Never (4.2%) Sometimes (17.3%) Often (25.8%) Always (52.3%) No answer (0.3%)

- 2.1) How often do you give your asthmatic patients information booklets about their disease?

Never (22.2%) Sometimes (25.5%) Often (22.9%) Always (29.1%) No answer (0.3%)

- 2.2) How often do you make sure that your asthmatic patients know the difference between relieving (bronchodilators) and anti-inflammatory treatment (inhaled steroid or antiallergics)?

Never (6.9%) Sometimes (18.0%) Often (36.9%) Always (37.6%) No answer (0.7%)

(ALMOST)	NEVER	(<10%) = 0
	SOMETIMES	(10-50%) = 1
	OFTEN	(50-90%) = 2
(NEARLY)	ALWAYS	(>90%) = 3

- 3) How often do you ask your patients to keep a written daily record of peak expiratory flow rate (PEFR)?

Never (16.0%) Sometimes (45.4%) Often (28.8%) Always (8.8%) No answer (1.0%)

- 3.1) When you see a patient with unstable asthma, how often do you obtain a measurement of PEFR?

Never (10.5%) Sometimes (26.1%) Often (33.0%) Always (29.1%) No answer (1.3%)

- 3.2) When you are evaluating the severity of asthma, how often do you use a peak flow meter?

Never (10.8%) Sometimes (36.6%) Often (33.0%) Always (17.7%) No answer (2.3%)

- 4) How often do you ask your patients to keep an asthma diary for recording their symptoms, such as asthmatic attacks?

Never (7.8%) Sometimes (20.9%) Often (30.1%) Always (40.8%) No answer (0.3%)

- 5) How often do you communicate to your patients your rating about the severity of their asthma?

Never (3.6%) Sometimes (22.2%) Often (39.2%) Always (34.6%) No answer (0.3%)

- 6) How often do you advise your patients to use the following criteria for recognizing life-threatening asthma attacks:

	Never	Sometimes	Often	Always	No answer
Symptoms	1.6%	6.5%	22.5%	67.6%	1.6%
Weak response to inhaled bronchodilators	4.2%	14.7%	29.7%	48.7%	2.6%
Decrease in PEF	15.4%	27.5%	30.4%	23.5%	3.3%
Others (specify.....)	6.2%	2.6%	2.9%	13.1%	75.2%

- 7) How often do you give your asthmatic patients a written action plan for self-managing severe asthma attacks?

Never (24.5%) Sometimes (33.7%) Often (25.2%) Always (14.7%) No answer (2.0%)

- 8) How often do you give your patients allergic to house dust a detailed written plan for dust avoidance?

Never (14.7%) Sometimes (28.1%) Often (25.5%) Always (30.7%) No answer (1.0%)

- 9) How often are you able to convince your patients of taking as much medication as they need to get rid of all their asthma symptoms?

Never (1.6%) Sometimes (10.1%) Often (48.0%) Always (39.2%) No answer (1.0%)

(ALMOST)	NEVER	(<10%) = 0
	SOMETIMES	(10-50%) = 1
	OFTEN	(50-90%) = 2
(NEARLY)	ALWAYS	(>90%) = 3

Table 4 continued

- 10) How often do you, or another trained person, check to make sure an inhaler (metered-dose aerosol or powder inhaler) is being used correctly?

Never (5.6%) Sometimes (19.9%) Often (42.2%) Always (32.0%) No answer (0.3%)

- 11) How often do you make sure that your patients receive regular supervision:

- from a specialist (incl. yourself)?

Never (4.2%) Sometimes (13.7%) Often (25.5%) Always (52.0%) No answer (4.6%)

- from a general practitioner?

Never (12.4%) Sometimes (21.2%) Often (20.6%) Always (28.4%) No answer (17.3%)

- 11.1) How often do you arrange a follow-up visit for patients discharged from the hospital after an acute attack or worsening of their symptoms?

Never (1.0%) Sometimes (2.6%) Often (21.2%) Always (70.9%) No answer (4.2%)

- 12) Have asthma societies been set up in your area to enable patients to meet, learn about and discuss their disease? Please indicate your answer

yes	no	don't know	No answer
32.0%	48.4%	19.6%	0%

- 12.1) If "yes", how often do you actively encourage patients to join an asthma society?

Never (23.5%) Sometimes (26.5%) Often (33.7%) Always (11.2%) No answer (5.1%)

- 13) How often do you issue a patient personal card to your patients?

	Adult	6-16 yrs	≤5 yrs
Never	49.8%	46.2%	52.1%
Sometimes	27.9%	24.8%	18.8%
Often	15.7%	10.3%	7.7%
Always	4.4%	13.7%	13.7%
No answer	2.2%	5.1%	7.7%

(ALMOST)	NEVER	(<10%) = 0
	SOMETIMES	(10-50%) = 1
	OFTEN	(50-90%) = 2
(NEARLY)	ALWAYS	(>90%) = 3

RESULTS

General Information

Answers to question 1 in Table 2 show the mean period of the respondents' practice as specialists was 18.8 years. Their specialties were diverse but not necessarily limited to one field, as reflected by the answers to question 2. The percentages (%) of the respondents by specialty are shown in parentheses.

Diagnosis

The questions and results are shown in Table 3.

Patient education and asthma management

The questions and results concerning patient education and asthma management are shown in Table 4. The order of priority for patients in achieving 'control of asthma' is shown in Table 4, question 1, with the percentages of physicians supporting it shown in parentheses.

DISCUSSION

This questionnaire survey was addressed to physicians specializing in the treatment of asthma patients.

The 1993 questionnaire survey on general information revealed an increase in the number of patients with asthma from 5 years previously, although no increase was observed in the number of patients having severe asthma. Results for departments of medicine and pediatrics were almost identical, although there was no specific classification in the questionnaire distinguishing examinations by internists and pediatricians. These findings reflect the recent increase in the number of patients with asthma in Japan.

For the diagnosis of asthma, serum specific IgE antibody screening and measurement of serum total IgE were more frequently performed than was skin testing. Peripheral blood eosinophil count and response to bronchodilators were frequently measured as adjuncts to the diagnosis. Patients were frequently asked detailed questions about aspirin-induced asthma. Mean percentages of patients with aspirin-induced asthma were 8.8, 2.2 and 1.5% in the adult, children and infant groups, respectively.

For patient education and asthma management, slightly different priorities were assigned by the physicians in achieving 'control of asthma' depending on patient age. First priority was given to coping with symptoms for infants 5 years of age or less and second to enabling routine daily life activities for children six years or older. Normal respiratory function (forced expiratory volume in one second [FEV₁] or peak expiratory flow [PEF]) was ranked last in achieving 'control of asthma', irrespective of age.

The usefulness of peak flow measurements in the treatment and management of asthma patients has been widely recognized.^{1,3,4} The present survey reveals that the majority of specialists recognize the importance of measuring the peak flow in relation to patient education and asthma management, although 16% of specialists replied 'never' to question 4 in Table 3: 'How often do you ask your patients to keep written

daily records of peak expiratory flow rate?' A detailed plan for the removal of house dust was given to patients suffering from house dust allergy. Therefore, in addition to pharmacotherapy, the importance of improving environment was well recognized.

Results of the survey of the diagnosis, patient education and management of asthma, together with the results of the survey on asthma treatment have been reported separately. It should be emphasized that specialists who replied to the questionnaire on the diagnosis, patient education and management of asthma very much appreciated *The Guidelines on Diagnosis and Treatment of Asthma in Japan*.²

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