

An overview of recent treatments of nasal allergy

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INTRODUCTION

The treatment of nasal allergy is changing as a result of the introduction of new therapies. We have examined recent trends in therapy by analysing prescriptions in our ENT out-patient clinic in 1980 and 1981.

ANALYSIS OF PATIENTS WITH ALLERGIC RHINITIS

Table 1 shows an analysis of patients with allergic rhinitis treated in our out-patient clinic during 1980 and 1981. The number of patients diagnosed as allergic rhinitis appears to be increasing year by year in Japan. In our ENT out-patient clinic, the percentage of allergic rhinitis patients to total patients was 7.2% 11 years ago, 11.5% 6 years ago and as Table 1 shows, it was 15.7% in 1980 and 18.4% in 1981.

Table 1. Analysis of patients with allergic rhinitis in our ENT out-patient clinic in 1980 and 1981.

	1980	1981
total out-patients	5,534 (100%)	5,564 (100%)
allergic rhinitis	871 (15.7)	1,023 (18.4)
adults	728	833
male	331	376
female	397 (1:1.2)	457 (1:1.2)
children	143	190
male	107	135
female	36 (3:1)	55 (2.5:1)

ANALYSIS OF THE TREATMENT OF ALLERGIC RHINITIS

Table 2 shows an analysis of the treatment of allergic rhinitis in 1980 and 1981. The types of treatment which increased in this period were sodium cromoglycate (SCG)(Intal®), steroids, nose drops containing vasoconstricting agents and surgery. In contrast, the use of hyposensitization, antihistamines and non-specific

drugs decreased during this period. SCG was the most widely used treatment, and was used in more than 50% of patients, thus indicating that SCG is the first choice therapy in the treatment of allergic rhinitis. Comment on an analysis of the use of each type of therapy is given as follows.

Table 2. Types of treatment of allergic rhinitis: Analysis and comparison of numbers of patients in 1980 and 1981.

type of treatment	1980	1981
	number and percent of patients in total 871	number and percent of patients in total 1,028
hyposensitization	247 (28.4)	243 (23.8)
SCG (Intal®)	458 (52.6)	602 (58.8)
antihistamines	219 (25.1)	156 (15.2)
corticosteroids	182 (20.9)	274 (26.8)
nonspecific drugs	62 (7.1)	46 (4.5)
nose drops	12 (1.4)	23 (2.2)
surgery	26 (3.0)	39 (3.8)
consultation only	117 (13.4)	145 (14.2)

HYPOSENSITIZATION

Table 3 shows an analysis of the allergens used in hyposensitization. As in other countries, house dust is the major causal allergen and is most widely used in hyposensitization. Next is Japanese cedar which is specific to Japan. Ragweed has become naturalized in Japan, although the incidence of its use in hyposensitization has decreased in recent years. Grass is not a problem in the city but causes some allergy in country areas.

Allergen extracts which are conventionally being used, are mainly aqueous extracts and alum-precipitated extracts. Considerable effort has been put into modifying extracts in ways that will slow absorption, increase antigenicity, or reduce allergenicity. Namely "allergoids", which are formalized allergens, allergens, which are polymerized by glutaraldehyde, and urea-denatured allergens, all of which are being developed. Such studies are only possible with purified aller-

Table 3. Analysis of allergen extract used in hyposensitization.

antigen	1980	1981
	number and percent of patients in total 247	number and percent of patients in total 243
house dust	164 (66.4)	181 (74.5)
Japanese cedar	71 (28.7)	52 (21.4)
house dust plus Japanese cedar	10 (4.0)	6 (2.5)
ragweed	1 (0.4)	2 (0.8)
alternaria	1 (0.4)	2 (0.8)

gens. But the effect obtained by hyposensitization with purified allergen does not seem to be superior to that of whole allergen. In recent papers, many authors have reported that the effectiveness of whole allergen is superior to that of purified allergen. But other papers have reported opposite results. It seems that for better hyposensitization, modification of allergen is necessary.

SODIUM CROMOGLYCAT

Table 4 shows an analysis of the use of sodium cromoglycate alone and in combination with other therapies. SCG is most widely used alone. Approximately 50%

Table 4. Analysis of SCG and combined therapy.

	1980	1981
group as devided by type of therapy	number and percent of patients in total 458	number and percent of patients in total 602
SCG (Intal®) only	228 (49.8)	276 (45.8)
SCG plus hyposensitization	65 (14.2)	97 (16.1)
SCG plus hyposensitization and others	8 (1.7)	43 (7.1)
SCG plus antihistamines	42 (9.2)	43 (8.8)
SCG plus oral steroid with anti- histamine (combined preparation)	76 (16.6)	61 (10.1)
SCG plus oral steroid with anti- histamine and others	13 (2.8)	16 (2.7)
SCG plus antihistamines and others	1 (0.2)	8 (1.3)
SCG plus topical steroids	9 (2.0)	31 (5.1)
SCG plus topical steroids and others	0 (0.0)	2 (0.3)
SCG plus others	16 (3.5)	15 (2.5)

Table 5. Mast cell stabilizing drugs.

Stage Category	Suspended	Under clinical evaluation	Approved
Topical		Tixanox Syntex MY-5231 Mistubishi Lodoxamide Upjohn Bufroline ICI	Disodium Cromoglycate Fisons
Oral	Doxantrazole Wellcome AH7725 Syntex PR-D-92-EA Pharma Research Proxicromil Fisons Nivimedone Beecham AA-344 Takeda AB-50 Chugai	SKF-78729A SKF Ru-31156 Russei Ro-21-7634 Roche Lodoxamide Ethyl Upjohn Traxanox Yoshitomi	Tranilast (N-5) Kissei
Oral with antihistamic activity		BM-1500 Boehringer Mannheim Oxatimide Janssen Azelastine Ehzaï, Asta	Ketotifen Sandoz

of cases are treated with this drug. It is used concomitantly most often with hypo-sensitization. Concomitant use with antihistamine is infrequent. SCG is concomitantly used with a combination of oral steroid plus antihistamine preparation in more than 10% of cases. Concomitant use with topical steroids is infrequent. This data indicates that with SCG alone, 50% of allergic rhinitis patients are fully controlled. The discovery of SCG prompted the development of new compounds and many research laboratories are now involved in the development of mast cell stabilizing drugs as shown in Table 5. Tranilast and Ketotifen are not yet approved for treatment of nasal allergy, although they have already been approved for the asthma indication in Japan.

STEROID THERAPY

Table 6 shows an analysis of the use of steroid therapy. In 1980, a combination of oral steroid plus antihistamine was most widely used but this was replaced by intranasal beclomethasone dipropionate in 1981. In Japan, intranasal beclomethasone dipropionate was approved in 1981 and flunisolide is waiting for government approval. Budesonide, developed by AB Draco of Sweden, is a non-halogenated steroid. There are a few papers reporting double blind trials on Budesonide. This drug is not yet available in Japan.

Table 6. Analysis of steroid therapy.

steroids	1980	1981
	number and percent of patients in total 182	number and percent of patients in total 274
oral steroid with antihistamine (combined preparation)	111 (61.0)	108 (39.4)
bdp	48 (26.4)	136 (49.6)
flunisolide	9 (4.9)	3 (1.1)
bdp plus flunisolide	6 (3.3)	2 (0.7)
betamethasone nose drop	5 (2.7)	5 (1.8)
bpd plus oral steroid with antihistamine	3 (1.6)	15 (5.5)
oral steroid with antihistamine and betamethasone nose drop	0	4 (1.5)
dexamethasone nose drop	0	1 (0.4)

ANTIHISTAMINE

Table 7 shows an analysis of the use of antihistamine therapy. It is more often used concomitantly than alone. With regard to the development of new antihistamine, no remarkable progress is seen worldwide.

Table 7. Analysis of antihistamine therapy.

group as divided by type of therapy	1980	1981
	number and percent of patients in total 219	number and percent of patients in total 156
antihistamine only	24 (11.0)	35 (22.4)
antihistamine plus others	195 (89.0)	121 (77.6)

NON-SPECIFIC THERAPY

Table 8 shows an analysis of the use of non-specific therapy. Histaglobin injection, which is a combination of gamma globulin and histamine, is most often used. Neurotropin injection, which is specially treated with virus active ingredient obtained from rabbit epidermis, is sometimes used, usually in combination with Hista-globin. Bacterial vaccination and Chinese traditional drugs are very rarely used.

Table 8. Analysis of non-specific therapy.

drugs	1980	1981
	number of patients in total 62	number of patients in total 46
histaglobin®	44	12
histaglobin® plus neurotropin®	9	22
neurotropin®	3	1
bronsasma-berna®	2	4
histaglobin® plus neurotropin® plus bronsasma-berna®	1	0
chinese traditional drugs	3	7

SURGERY

Table 9 shows an analysis of the use of surgery. Deviatomy and turbinectomy are most often used, although patient numbers requiring surgery are small. Cryosurgery is used not so often and Vidian neurectomy, electrocoagulation and electrocautery are not used at all.

Table 9. Analysis of surgery.

method	1980	1981
	number of patients in total 26	number of patients in total 39
deviatomy plus turbinectomy	12	13
cryosurgery	9	7
turbinectomy	3	13
polypectomy	1	4
deviatomy	1	2

IPRATROPIUM BROMIDE

Topical Ipratropium Bromide is claimed to have anti-cholinergic activity. This compound is originated by Boehringer Ingelheim in West Germany and is known under the brand name, Atrovent®. The reported results indicate that Ipratropium effectively inhibits methacholine-induced hypersecretion and may have a therapeutic effect in nasal allergy and in common cold. Ipratropium for bronchial asthma has already been marketed in many countries. Intranasal Ipratropium, however, is not yet approved in Japan. Preliminary studies are now in progress. There is a possibility that this drug will be of some value in the management of rhinorrhea.

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