THE UPPER RESPIRATORY SYNDROME

A clinical study of a new decongestant nasal spray

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In autumn and winter patients with blocked and running noses form a considerable proportion of the family doctor's daily round and their treatment is, for him, a 'common task' indeed. The familiar epidemic caused by the protean rhinovirus accounts aetiologically for a major proportion of patients with these symptoms, but apart from the common cold, nasal blockage and rhinorrhoea may be caused also by acute and chronic rhinitis due to bacterial infection, allergy and, not uncommonly to chemical irritation. In the latter group ill-advised prolonged application of ephedrine drops is of major importance since this substance is particularly liable to produce rebound congestion and a vicious circle of symptoms and harmful remedy.

The multiplicity of oral sympathomimetic preparations and the even greater variety of nasal drops and sprays gives convincing evidence of the demand for symptomatic relief from nasal blockage and rhinorrhoea. It also suggests that no particular preparation is markedly better than the general run.

The present study

Rhinaspray* is an imidazoline derivative like many other nasopharyngeal vasoconstrictors. Previous experience with its use in Germany has suggested that it is relatively free of side actions, very quick in onset of effect and is conveniently long acting (Czysch and Keller (1962), Hahn (1962), Hoeltz (1962), Liebrich and Renovanz (1962), Starke (1963)). Rhinaspray is intended for use in 'catarrhal states', acute and chronic sinusitis. It is presented under the brand name 'rhinaspray' in plastic 'squeeze bottles' each containing 12 ml. of a 0.1 per cent solution.

*'Rhinaspray' is the brand name for 2 (5, 6, 7, 8 - Tetrahydro -1- Napthyl-amino)-2-Imidazoline hydrochloride.

Methods. The trial was restricted to patients over the age of 10 years. Each patient receiving ' rhinaspray ' was seen at least twice during the study. For many who had short duration illness such as coryza the period of trial was only one week but for others the preparation was given for two, three or even four weeks.

Dosage. Every patient was instructed to spray the nasopharynx via the nostrils first thing in the morning and to repeat the medication as soon and as often as symptoms became troublesome again. The technique of self-administration consisted of thorough clearing of the nose followed immediately by an application of the spray. This was carried out twice for each administration of the preparation.

Records. The data relating to each patient was recorded on a standard *pro forma* upon which provision was made for noting such factors as the time of onset, duration of action and side-effects of the preparation under study.

Results

The results of the administration to 54 patients, 29 men and 25 women, with rhinorrhoea and nasal blockage are summarized in tables I–VI. From these it may be seen that the series comprised virtually equal numbers of men and women, the greatest proportion being between the ages of 20 and 40 years (half the total). The commonest diagnostic group in the series was that of chronic rhinitis but acute rhinitis was almost as common. Next in order of frequency came acute sinusitis whilst only two cases of allergic disorders and one case of chronic sinusitis occurred in the series.

There was a relatively high incidence of associated auditory symptoms including deafness and tinnitus since these occurred in a fifth of cases. Lower respiratory symptoms were uncommon and occurred in only three patients out of 54. Multiple symptomatology occurred in just over one-third of patients treated, and there was a particular correlation of chronic rhinitis and auditory symptoms.

Analysing the observations about speed of onset of action (table IIIa) it is clear that ' rhinaspray ' is remarkably quick in achieving its beneficial effects. Thus over half of patients obtained relief within five minutes of application and to this estimate should almost certainly be added a further number where the onset of action was recorded as rapid, speedy or quick. Thus it is likely that about three-quarters of patients obtained a response to ' rhinaspray ' within five minutes of application.

The speed of onset of action was doubtful or not recorded in nine cases and the remaining four cases in the series were evenly distributed between times of onset at 10, 20, 30 and more than 30 minutes after the start of treatment.

' Rhinaspray' appears to be a long-acting preparation in many cases

Rhinitis trial—Results tabulated

TABLE I

Age groups	
10–19	7
20–29	12
30–39	12
40–49	9
50–59	5
60+	7
Age unstated	2

TABLE II (*a*)

Diagnostic groups	
Acute rhinitis (including 'coryza')	20
Chronic rhinitis (includ- 'catarrh')	23
Acute sinusitis	12
*Association lower respiratory symptoms (including cough and bronchitis)	3
*Associated auditory symptoms (including deafness and tinnitus)	10
Chronic sinusitis ..	1
Other (including 'allergy')	2

TABLE II (*b*)

Symptoms complexes	
Acute rhinitis + acute sinusitis	5
Acute rhinitis + auditory symptoms	2
Acute sinusitis + auditory symptoms	1
Chronic rhinitis + acute sinusitis + auditory symptoms	1
Chronic rhinitis + bronchitis	2
Chronic rhinitis + asthma	1
Chronic rhinitis + auditory symptoms	6

*N.B.—These figures for symptoms are included to detail the incidence in the series. The symptoms are not regarded as a diagnosis: e.g. a patient with acute rhinitis may have deafness. This patient appears twice in the table. Once under 'acute rhinitis' and once under 'associated auditory symptoms'.

(table IIIb) since 19 patients recorded a duration of action longer than six hours. In 18 the duration of action was between three and six hours and in only eight did the preparation produce relief for less than three hours. In nine patients the duration of action was doubtful or not recorded by the observer. This impression of a long or fairly long duration of action is supported by data on the frequency of daily dosage (table IIIc).

Thus half the patients required 'rhinaspray' application twice a day or less and a further third required the preparation only three times daily. Of the remaining eight in the series only three needed

Rhinitis trial—Results tabulated (*contd.*)

TABLE III (*a*)

Speed of onset of action	
0– 5 minutes	28
6–10 minutes	2
11–20 minutes	2
21–30 minutes	2
More than 30 minutes ..	2
Onset not clearly given:	
' rapid '	5
' speedy '.. ..	2
' quick '	2
Onset not stated or doubtful	9

TABLE III (*b*)

Duration of action	
Less than one hour ..	2
1–2 hours	3
2–3 hours	3
3–4 hours	10
4–5 hours	5
5–6 hours	3
More than 6 hours ..	19
Duration not stated or doubtful..	9

TABLE IV

Side-effects	
Symptoms	
Head	3
Nausea	4
Insomnia	—
Palpitations	—
Nasal discomfort	6
Sneezing	1
Dizziness	1
Signs	
Mucosal dehydration	3
Crusts	4
Reactive hyperaemia	5
Bleeding (epistaxis)	1
Treatment discontinued because of side-effects (nasal discomfort)	1

TABLE V

Frequency of daily dosage	
Once	11
Twice	16
Three times	15
Four times	8
More than four times	3
Very variable	6

TABLE VI

Relationship—diagnosis to relief of symptoms

Diagnostic group	*Total cases*	*Rhinorrhoea*			*Nasal stuffiness*		
		Complete	*Partial*	*None*	*Complete*	*Partial*	*None*
Acute rhinitis (including 'coryza')	20	12	3	2	17	2	1
Chronic rhinitis (including 'catarrh')	23	4	10	3	12	9	2
Acute sinusitis	12	7	3	†	8	4	—
		Deafness			*Tinnitus*		
Associated auditory symptoms (including deafness and tinnitus)	10	3	4	1 (*2) ?	—	2	1 (*2) ?
Associated lower respiratory symptoms (including cough and 'bronchitis')	3	—	2	1			
		Rhinorrhoea			*Nasal stuffiness*		
Chronic sinusitis	1	1	—	—	1	—	—
Other (including 'allergy')	2	1	—	1	1	—	1

† 2 cases without this symptom
* One case not adequately reported

the preparation more than four times daily whilst the frequency of daily dosage was stated to be very variable in six patients.

The frequency of daily dosage was highest at the commencement of treatment and as improvement in the condition occurred the number of applications declined sharply. The preparation does not appear to induce rebound congestion or produce habituation, both of which phenomena would necessitate increasing frequency of dosage and not the reverse.

Side-effects from 'rhinaspray' are remarkable by their absence.

Thus only one patient had to stop treatment on account of nasal irritation and there were no instances of systemic effects that could be definitely related to the preparation under test.

Headache was recorded in three cases, nausea in four and dizziness in one. Since these symptoms also occur in the conditions under treatment they cannot with any confidence be attributed to ' rhinaspray '. In six cases nasal discomfort was complained of and in one case sneezing was said to be a side-effect.

The secondary results of vasoconstriction, reactive hyperaemia, crusting and mucosal dehydration were also rare. In only five cases was reactive hyperaemia recorded and in none of these was it severe enough to demand discontinuation of treatment.

The relief from symptoms following medication with ' rhinaspray' is summarized in table VI. This table is largely self-explanatory and the data illustrate the fact that this preparation produces complete relief from nasal stuffiness and rhinorrhoea in virtually all patients with acute rhinitis whilst considerable relief occurred in the majority of those with chronic rhinitis.

Conclusions cannot be drawn from data relating to other diagnostic groups since there are insufficient numbers of patients in these groups. Improvement in hearing occurred in seven out of ten patients who complained of deafness in association with their upper respiratory symptoms and one remarked that she could hear the tick of her clock for the first time in years after a course of ' rhinaspray '.

Summary

Fifty-four cases of patients complaining of nasal stuffiness and rhinorrhoea have been treated with ' rhinaspray '. By means of clinical observation, data has been collected to show that this new preparation is quick acting, of moderately prolonged effect and free from side-effects. These features make it a promising addition to the existing range of preparations designed for the treatment of a particularly common and troublesome syndrome.

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APPENDIX

A note on nomenclature

In collating the information forthcoming from this study it has been striking that the diversity of symptoms and diagnosis that are associated with nasal blockage and rhinorrhoea can reasonably be summarized in one diagnosis: the *upper respiratory syndrome.* This is all the more reasonable since the mucous membrane of nose, throat, sinuses and eustachian tubes is anatomically in continuity and probably affected in entirety during any inflammatory process, whatever its cause. Added to this is the fact that aetiology in cases of this sort is rarely established with any precision and that rhinorrhoea and nasal blockage may be due to a diversity of causes. That the term 'common cold' is a misnomer has now been generally accepted and in all probability several factors are operative in any one case to produce the symptoms formerly attributed to it.

Thus it is proposed that the single term upper respiratory syndrome should be used to describe all cases with rhinorrhoea and nasal blockage and that the designations 'acute' should be employed when the symptoms are of short duration and 'chronic' when they are of long duration. In cases where malar aching or frontal headache are prominent the suffix "with marked sinusitis" should be added, and in patients with auditory symptoms the suffix "with marked eustachian catarrh" should be used. With this simplified terminology such vague terms as catarrh are eliminated and anachronistic diagnosis like common cold are rendered unnecessary. By simplification a clearer appreciation of the nature of the disorder, and hence a more rational approach to treatment, can be achieved.

IN OTHER LANDS

A STUDY OF THE GERIATRIC SERVICES IN THE UNITED STATES

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This survey was to determine how the United States were handling the future of their old people's care in the light of their new Medicare Bill, now being debated by Congress. The problems that confront the Federal Government are many, the greatest being that there are