Empirical Data on Therapy with a Homeopathic Nasal Spray

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Results of a multicentric prospective study of 3510 patients

S. Zenner M.D., H. Metelmann

Summary

A homeopathic rhinologic agent in spray form was tested for efficacy and tolerance in a prospective study. A total of 381 physicians supplied documentation on 3510 cases treated. Acute rhinitis was the complaint for which this homeopathic remedy was most frequently prescribed, while additional usage indications included acute and chronic sinusitis and allergic rhinitis. The preparation was also administered to patients with rhinitis sicca, chronic rhinitis medicamentosa, and hypertrophic rhinitis. Out of the entire patient population, 38.5% of the cases were treated exclusively with the homeopathic nasal spray, while the remainder required additional pharmaceutical or non-pharmaceutical therapeutic measures. Final assessment of the study revealed "very good" or "good" therapeutic results in 80.8% of cases treated. The preparation was well tolerated by the patients.

1. Introduction

Commercially available topical rhinologic agents in the form of sprays or drops contain a variety of active ingredients. Most of the preparations on the market contain sympathomimetics, corticoids, or antihistamines. These chemical ingredients are temporarily effective for certain symptoms because they reduce swelling of the nasal mucosa or decrease sensitivity to allergens.

In contrast, rhinologic agents with homeopathic ingredients are based on a different effective principle. Experience shows that they have a stimulating effect on mucosal function and can promote regeneration of damaged tissue. Thus, the therapeutic goal in administering these preparations is not so much the immediate and temporary relief of symptoms but rather lasting improvement or—if possible—a complete cure.

This multicentric prospective study investigated the therapeutic results that can be achieved in practice with Euphorbium compositum Nasal Spray S, a rhinologic agent prepared according to HAB [German Homeopathic Pharmacopeia] regulations on the production of homeopathic remedies. This preparation includes only homeopathic ingredients, specifically three plant substances (Euphorbium, Pulsatilla, and Luffa) and homeopathic potentiations of three mineral substances (Mercurius bijodatus, Hepar sulfuris, Argentum nitricum). It also contains Mucosa nasalis suis (a potentiated organ preparation) and sinusitis nosode. On the basis of its composition, the preparation can be expected to be broadly effective in disease processes of the mucosae of the nose and paranasal sinuses. In view of the pharmaceutical pictures of its individual components, usage indications for this preparation include rhinitis of various origins (viral, bacterial, allergic), rhinitis sicca, hyperplastic and atrophic rhinitis, and chronic sinusitis; it is also indicated to support the treatment of ozena and to facilitate nasal respiration in hay fever cases.

A nasal spray of approximately the same composition as the preparation investigated here (having the same name but without the supplementary label "S") had already been commercially available in Germany for more than a decade. This earlier formulation of Euphorbium compositum was the subject of numerous empirical reports and scientific investigations. The formula was slightly altered in 1988 in order to conform to current criteria for pharmaceutical quality and safety. The goal of the prospective study presented here was to provide the broadest possible basis for understanding the efficacy and tolerance of the reformulated preparation.

2. Methodology

2.1 Implementation

The patients accepted into this prospective study suffered from either acute or chronic diseases of the mucosae of the nose or paranasal sinuses. No further criteria for inclusion or exclusion were set, since the investigation was intended to provide as comprehensive a picture as possible of the therapeutic applicability of the homeopathic rhinologic agent. Each of the 381 participating physicians was supplied with an appropriate number of standardized questionnaires for recording all relevant details of treatment in each individual case.

The following data were to be recorded for each patient at the time of admission to the study: age, gender, the diagnosis that led to treatment with the homeopathic nasal spray, and the duration of symptoms prior to the beginning of therapy. In the course of treatment, the dosage of the preparation under investigation was to be recorded, as were any supplementary pharmaceutical and non-pharmaceutical therapeutic mea-

sures. At the end of treatment, the duration of use of the homeopathic nasal spray was to be noted on the questionnaire. The attending physician was asked to evaluate the success of the treatment according to one of the following five categories: "very good" (complete and lasting freedom from symptoms), "good" (clear and lasting improvement or temporary freedom from symptoms), "satisfactory" (temporary improvement), "no success" (symptoms remained the same), or "worse." The appearance of any undesirable side effects was to be noted in the space provided for comments and clarification.

The study ran from April 1990 to April 1991. As of 4/15/91, the participating physicians had returned 3527 completed questionnaires to the manufacturers of the preparation.

2.2 Processing and statistical evaluation of the data

Of the total number of questionnaires returned, 17 (0.5%) failed to report the condition being treated or the results of therapy, or a different form of the preparation under study had been administered by mistake. These questionnaires were checked for any indications of undesirable side effects (there were none) and eliminated from further analysis.

The data were evaluated using the methods of descriptive statistics. Aspects under investigation are presented here partly by listing average values (arithmetic mean) and partly by listing frequency distributions in terms of absolute numbers or percentages. Since not all questions were answered on all questionnaires, however, the percentages listed do not always add up to 100%.

3. Results

3.1 Patient Demographics

Of the 3510 patients whose questionnaires were suitable for statistical evaluation, 1870 (53.3%) were female and 1630 (46.4%) male; in 10 cases (0.3%), no gender was given. The average age of the total patient population was 35.2 years. There was no significant difference in mean age between male and female patients (34.7 years for males versus 35.9 years for females). Age and gender distributions of the patients for whom com-

Diagnosis	Number of cases	Duration of symptoms less than 1 week	Duration of symptoms 1 week - 1 month	Duration of symptoms longer than 1 month
Acute rhinitis	686	74.2%	24.3%	1.5%
Acute sinusitis	576	68.2%	29.9%	1.9%
Other diagnoses	63	39.7%	22.2%	38.1%
Multiple diagnoses	475	29.7%	31.6%	38.7%
Allergic rhinitis	506	13.6%	34.8%	51.6%
Atrophic rhinitis/ rhinitis sicca	469	4.5%	24.7%	70.8%
Hypertrophic rhinitis	97	2.1%	28.8%	69.1%
Chronic sinusitis	509	1.8%	26.9%	71.3%
Chronic rhinitis medicamentosa	129	0.8%	10.1%	89.1%

Tab. 1: Types of disorders treated with the homeopathic rhinologic agent (arranged in order of duration of symptoms)

Diagnosis	Single therapy with the homeopathic rhinologic agent	Supplemental pharmaceutical therapies	Supplemental non-pharmaceutical therapies	Supplemental pharmaceutical and non-pharmaceutical therapies
Acute rhinitis	61.1%	14.4%	17.2%	6.7%
Chronic rhinitis medicamentosa	60.5%	5.4%	23.3%	10.1%
Hypertrophic rhinitis	57.6%	21.2%	9.1%	11.1%
Atrophic rhinitis/ rhinitis sicca	54.7%	6.4%	28.7%	9.8%
Multiple diagnoses	23.5%	23.7%	19.9%	32.2%
Acute sinusitis	21.7%	17.4%	22.4%	37.7%
Chronic sinusitis	15.9%	16.7%	29.4%	38.0%
Other diagnoses	14.3%	38.1%	19.0%	28.6%

Tab. 2: Percentages of patients in the various diagnostic groups receiving single therapy or various supplemental therapies

Diagnosis	Drugs to reduce swelling	Anti-allergics	Antibiotics	Anti-inflammatories	Corticoids	Homeopathic remedies	Immuno-stimulants	Secreto-lytics
Acute sinusitis	0.3%	-	15.4%	2.1%	-	22.4%	1.0%	25.2%
Chronic sinusitis	1.4%	1.0%	7.1%	1.6%	0.4%	24.1%	3.5%	26.3%
Acute rhinitis	0.9%	0.1%	1.4%	1.2%	-	7.3%	2.5%	7.4%
Allergic rhinitis	0.8%	24.3%	-	0.2%	1.4%	17.9%	1.2%	1.2%
Atrophic rhinitis/ rhinitis sicca	0.4%	0.2%	0.4%	0.2%	0.2%	3.8%	1.7%	0.8%
Hypertrophic rhinitis	4.1%	2.1%	1.0%	1.0%	1.0%	7.2%	6.2%	7.2%
Chronic rhinitis medicamentosa	0.8%	-	-	-	-	8.5%	2.3%	2.3%
Other diagnoses	1.6%	6.3%	20.6%	-	-	19.0%	1.5%	33.3%
Multiple diagnoses	2.3%	6.3%	9.4%	2.3%	1.2%	16.4%	2.3%	25.2%
Total patient population	1.0%	4.7%	5.6%	1.2%	0.5%	14.9%	2.2%	14.0%

Tab.3: Percentages of patients in different diagnostic groups receiving other medications in addition to the homeopathic nasal spray

plete information was supplied with regard to both these variables are presented in Figure 1, which shows that the experimental group included patients of all ages, with children and adolescents also constituting relatively high percentages.

3.2 Diagnoses and Duration of Symptoms

In this prospective study, the homeopathic nasal spray under investigation was administered for a variety of indications. The most frequent reason for treatment was acute rhinitis, followed by acute sinusitis, chronic sinusitis, and allergic rhinitis. Rhinitis sicca, atrophic rhinitis, chronic rhinitis medicamentosa, and hypertrophic rhinitis were also reported in larger numbers of cases. Approximately 15% of patients were multiply diagnosed.

For further sub-analyses, the patients were grouped according to diagnosis. For the sake of clearly delineating the groups, only a single diagnosis could be the basis for assigning each case to an individual group. Patients for whom multiple diagnoses were listed were assigned to a special group under that heading.

Contrary to the procedure just outlined, however, it seemed to make sense to assign the patients diagnosed with rhinitis sicca and atrophic rhinitis to a common group ("atrophic rhinitis/rhinitis sicca"), regardless of whether or not both diagnoses were listed on the questionnaire. Transitions between these two syndromes are fluid and instances of diagnostic overlap numerous. Consequently, this combination was considered to constitute a single diagnosis for purposes of evaluation.

Taking this viewpoint into consideration, the following nine diagnostic groups were established:

- Acute rhinitis (686 cases)
- Acute sinusitis (576 cases)
- Chronic sinusitis (509 cases)
- Allergic rhinitis (506 cases)
- Atrophic rhinitis/rhinitis sicca (469 cases)
- Chronic rhinitis medicamentosa (129 cases)
- Hypertrophic rhinitis (97 cases)
- Other diagnoses (63 cases)
- Multiple diagnoses (475 cases)

For the patient population as a whole, the duration of the illness or symptoms prior to the beginning of therapy was less

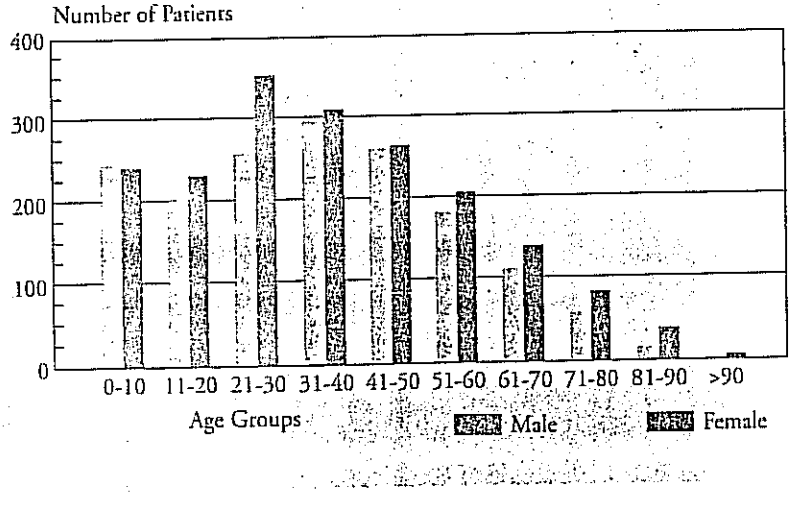

Fig. 1: Age and gender distribution of patients (n = 3483)

Diagnosis	Number of patients with this diagnosis	% of cases reporting "very good" or "good" results of therapy
Acute sinusitis	576	94.4%
Acute rhinitis	686	93.4%
Other diagnoses	63	85.7%
Multiple diagnoses	475	76.8%
Chronic sinusitis	509	75.4%
Atrophic rhinitis/rhinitis sicca	469	73.9%
Chronic rhinitis medicamentosa	129	70.5%
Allergic rhinitis	506	69.3%
Hypertrophic rhinitis	97	60.8%

Tab.4: Diagnostic groups arranged in order of relative frequency of "very good" and "good" therapeutic results reported

than one week in 33.3% of cases and more than one week but not more than one month in 27.7%. In 17.2% of the cases treated, the duration of symptoms ranged from one month to one year, while in 15.9% it ranged from one to five years. A prehistory of more than five years was reported in 5.8% of patients.

Considerable differences in the duration of symptoms were noted among the diagnostic groups. Table 1 presents an overview of time elapsed between the onset of symptoms and the beginning of therapy. Within each diagnostic group, the percentages of patients with symptoms lasting less than one week, one week to one month, and more than one month are listed separately. The diagnostic groups are listed in order of their percentages of cases with symptoms that had lasted less than one week, i.e., the diagnosis with the shortest average duration of symptoms is listed first, while the diagnosis with the longest duration of symptoms appears at the bottom of the table.

3.3 Medication

Out of the total patient population, 38.5% of cases were treated exclusively with the homeopathic nasal spray that was the subject of this investigation. 60.9% of the patients received additional pharmaceutical or non-pharmaceutical therapies. In 20.8% of the cases treated, the supplemental therapeutic measures were limited to non-pharmaceutical procedures (primarily radiation therapy and inhalation therapy). 18.6% of the patients received exclusively pharmaceutical supplemental therapies, while 21.5% of the cases required the implementation of a combination of pharmaceutical and non-pharmaceutical supplemental measures. Table 2 gives the percentages of the various forms of therapy (single therapy, supplemental pharmaceutical therapy, non-pharmaceutical supplemental measures, and combination therapies) used in each of the individual diagnostic groups. The groups are listed in order of their relative frequency of single therapy with the nasal spray under study. It becomes evident that the homeopathic nasal spray was the only therapeutic measure implemented in a considerable portion of cases, especially in acute rhinitis but also in other disorders of the nasal mucosa (chronic rhinitis medicamentosa, hypertrophic rhinitis, rhinitis sicca). In contrast, as is to be expected, the proportion of patients receiving supplemental therapies was significantly higher in cases of paranasal sinus involvement in the disease process (acute and chronic sinusitis) and also in multiply diagnosed cases.

In addition to dividing the patients into different therapeutic groups (single therapy, pharmaceutical and non-pharmaceutical supplemental therapy), a breakdown of the patient population was also undertaken on the basis of the types of medication administered. The percentages of patients treated with the eight most important types of supplemental medication are shown in Table 3. These percentages refer to the total number of patients in each diagnostic group or in the patient population as a whole.

3.4 Frequency of application and dosage of the nasal spray under investigation

The topical rhinologic agent investigated by this prospective study is avail-

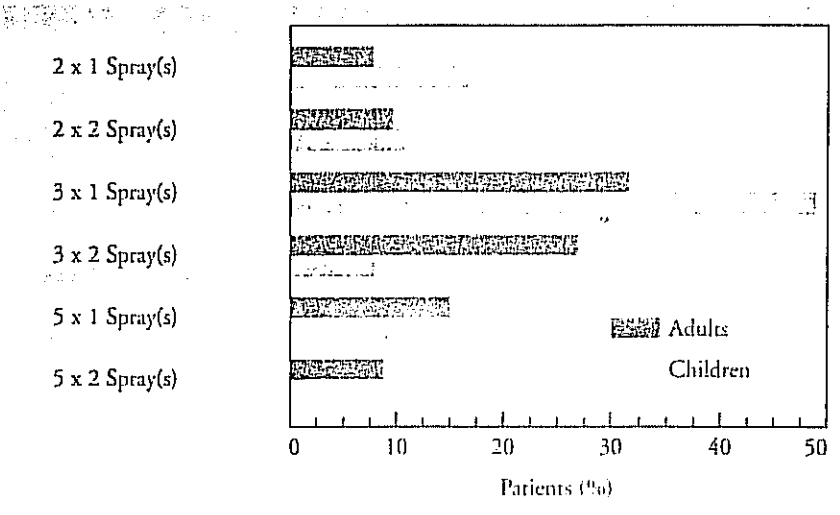

Fig. 2: Dosage of the homeopathic rhinologic agent in adults and children under 6 (n=3491)

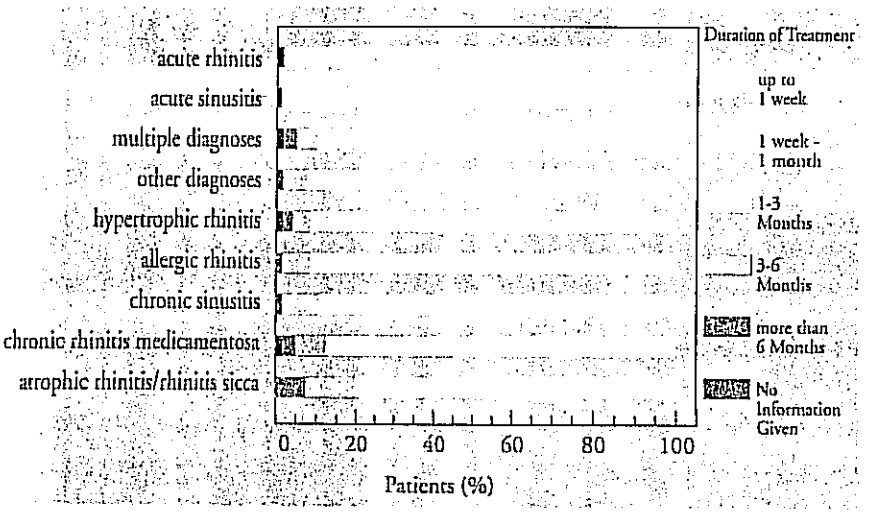

Fig. 3: Duration of treatment with the homeopathic rhinologic agent as a factor of diagnosis (n=3510)

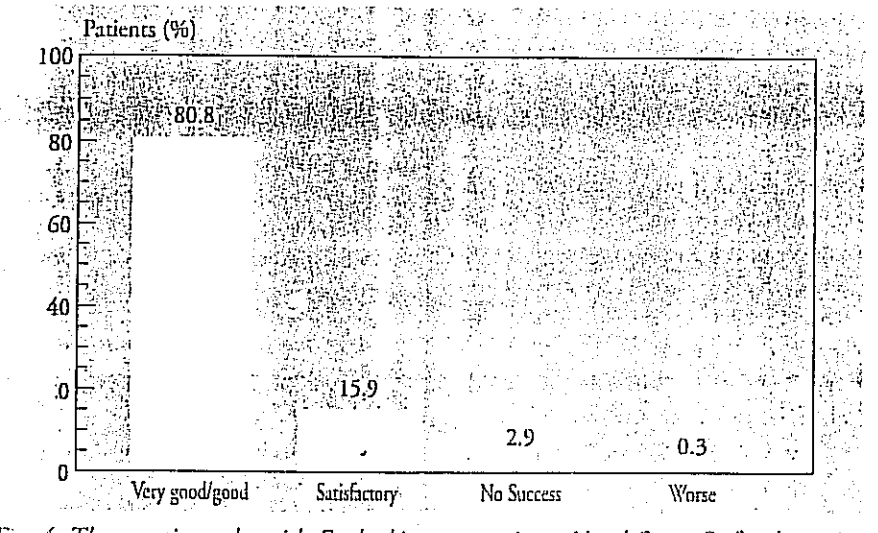

Fig. 4: Therapeutic results with Euphorbium compositum Nasal Spray S, for the entire patient population (n=3510)

able in the form of a metered spray without propellant. The manufacturer's dosage recommendation reads: *Unless otherwise directed by a physician, 1-2 sprays into each nostril 3-5 times daily; for children under 6, 1 spray 3-4 times daily.* The dosages of this preparation administered to patients accepted into the prospective study are analyzed below.

For almost a third of the patients (32.3%), the prescribed dosage of the homeopathic rhinologic agent was 1 spray 3 times daily. A little more than one quarter of the patients (26.7%) applied 2 sprays 3 times daily. The third most frequent dosage was 1 spray 5 times daily (15.0% of documented cases of treatment). All other dosage regimens were each prescribed for less than 10% of the patients in the prospective study.

In the group of children under age 6, a dosage of 1 spray 3 times daily was prescribed in 48.6% of cases, while in 15.5% of such cases, a dosage of 1 spray 2 times daily was prescribed and 13.9% received 1 spray 5 times daily. Figure 2 shows the percentages of different dosage regimens for adults and for children under 6. Clearly, dosages were generally lower in children than in adults. Adult patients received an average of 4.84 sprays per nostril per day of treatment, while children under 6 received an average of 3.57 sprays per nostril per day.

3.5 Duration of Treatment

One of the most important requirements for achieving optimal pharmaceutical results, especially with homeopathic preparations, is adequate duration of treatment. Therefore, the length of time for which the nasal spray under study is customarily prescribed is of particular interest.

In more than half (56.5%) of the patients involved in the prospective study, the duration of treatment ranged between one week and one month. 16.8% were treated with the homeopathic nasal spray for less than one week. Duration of treatment was more than one month in 18.4% of cases, more than three months in 5.5%, and more than six months in 2.3%. If duration of therapy is considered separately for each of the different diagnoses, it is apparent that acute rhinitis required the shortest course of treatment; in almost half (45.2%) of such cases, treatment less than one week was sufficient, while the remaining patients with this diagnosis were treated with the homeopathic rhinologic agent for more than one week but no more than one month. Among cases of acute sinusitis, scarcely 25% were treated for a period of less than one week, but in this group the longest period of treatment documented was also approximately one month. In the remaining diagnostic groups, however, treatment was implemented for considerably longer period of time. The longest courses of treatment were documented in patients with atrophic rhinitis/rhinitis sicca. In this group, the percentage of patients for whom therapy lasted less than one month was only 4%, while 31.1% were treated for a period of up to 3 months, 12.6% for up to 6 months, and 6.6% for even longer than 6 months. Figure 3 illustrates the duration of treatment as a function of diag-

3.6 Results of Therapy

With regard to the entire patient population, results of therapy were evaluated as "very good" or "good" in 80.8% of all cases. In addition, "satisfactory" therapeutic results were reported for 15.9% of patients. No improvement was noted in only 2.9% of all cases, while worsening of symptoms during the period of treatment was reported in 0.3%. The percentages of different therapeutic results for the entire patient population are illustrated in Figure 4.

If the results of therapy are broken down according to individual diagnostic groups, it is evident that the highest percentage of "very good" or "good" results were reported in cases of acute sinusitis (94.4%). The therapeutic success rate was almost as high in acute rhinitis (93.4% "very good" or "good" therapeutic results). In addition, chronic or difficult-to-treat symptoms such as chronic sinusitis, rhinitis sicca, and chronic rhinitis medicamentosa were successfully treated in a considerable portion of cases.

The different diagnostic groups were arranged in order of percentages of " very good" or "good" therapeutic results reported in each group. Table 4 shows the percentages of cases rating results of treatment as "good" or better in each diagnostic group.

If results are compared for cases of treatment with and without supplemental therapeutic measures, it becomes evident that the results of therapy were given higher ratings when the homeopathic nasal spray was administered alone than when it was combined with pharmaceutical or non-pharmaceutical supplementary measures. The combined percentage of "very good" and "good" results was 82.4% when the preparation was administered alone, 81.8% when non-pharmaceutical supplementary measures were implemented, and 76.9% in cases when other pharmaceuticals were prescribed. When a combination of pharmaceutical and non-pharmaceutical supplemental therapies were implemented, "very good" or "good" results were noted in 80.5% of cases. These results are surprising at first glance, but in all likelihood they can be interpreted as meaning that the cases requiring supplemental therapies generally involved more entrenched symptoms and were therefore more difficult to treat. Alternatively, the remarkably high percentage of "very good" and "good" therapeutic results reported when the homeopathic nasal spray was administered alone might be interpreted as indicative of the therapeutic effectiveness of the preparation under investigation, since in this subgroup of patients (constituting 1351 cases or nearly 40% of the total patient population) there were no other therapeutic measures to detract from the significance of the documented results of the single treatment.

3.7 Tolerance of the Preparation

During the prospective study, undesired phenomena were observed in a total of 27 patients while the homeopathic nasal spray was being administered. In one of these cases the attending physician spontaneously described the causal connection as unlikely, since other medication could account for the patient's nausea. In 11 cases mild sensations of discomfort in the nasal mucosa after applying the homeopathic nasal spray (e.g., tingling, itching, or burning) were reported. Six patients developed nosebleeds in the course of treatment. Five patients complained about an intensified sensation of dryness in the nose after applying the nasal spray. In one case rhinoscopic examination revealed thickened, cracked mucosae after a short period of treatment. In addition, in one case each fatigue, a feeling of pressure in the area of the paranasal sinuses, and a presumed allergic reaction with the appearance of urticaria and erythema were reported.

The majority of these cases of undesired effects involved harmless phenomena that disappeared quickly. The causal connection between administration of the preparation and the observed phenomena is to be considered questionable in at least a portion of these patients. It is quite conceivable that some of the reported incidents could be attributed to the underlying illness (e.g., tingling in the nose as a symptom of allergic rhinitis) and that the nosebleeds were triggered by excessively strong nose-blowing.

4. Discussion

Large-scale trials in actual practice are of great significance in assessing the efficacy of a pharmaceutical. Prospective studies with standardized questionnaires are especially suited to collecting and systematically evaluating empirical data on the therapeutic effects of a particular preparation.

The study at hand, involving 3510 patients, was able to demonstrate that in treating sinusitis and rhinitis of various origins, the use of homeopathic preparations is justified along with corticoids, antihistamines, and medications that reduce mucosal swelling. The usage indications of the nasal spray investigated here range from acute but uncomplicated rhinitis to difficult-to-treat syndromes such as rhinitis sicca and chronic rhinitis medicamentosa.

Since the homeopathic rhinologic agent under investigation was administered along with other therapeutic measures in a portion of cases, the documented results cannot prove its therapeutic effectiveness in any strict sense. However, the fact that in the subgroup of patients not receiving supplemental treatment somewhat higher success rates were noted than among patients receiving combined therapies clearly indicates that the therapeutic successes reported are not exclusively due to the supplemental therapies.

Although in a few cases in this prospective study the appearance of undesired phenomena concurrent with the application of the homeopathic rhinologic agent was documented, the results of the investigation confirmed that the nasal spray is well tolerated by patients. In assessing this preparation's uses and risks, the fact that it is well tol-

erated is especially significant because it allows treatment over a period of months without giving reason to expect the appearance of mucosal damage or drug dependency. The preparation studied here can therefore be described as an effective therapeutic agent in the treatment not only of acute but also especially of chronic disorders in the mucosae of the nose and paranasal sinuses.

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For the authors:

S. Zenner, M.D.
Biologische Heilmittel Heel GmbH
Ruhrstraße 14
7570 Baden-Baden
Germany