EFFECTS OF HOMEOPATHIC INTERVENTION ON MEDICATION CONSUMPTION IN ATOPIC AND ALLERGIC DISORDERS
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Context • Allergies are the most common immunologic diseases among the general population. Increasing evidence suggests that the incidence of allergic disorders is rising dramatically. Conventional medicine provides only limited relief and does not offer a complete cure to this health problem. Consequently, patients seek additional approaches and therapies to integrate into their healthcare. Homeopathy is one of the leading complementary modalities used to treat this health problem.

Objective • This preliminary study assessed the effect of integrating homeopathic treatment in allergic diseases on conventional medication consumption in a health maintenance organization.

Design • Retrospective outcome study designed as a before-after trial.

Setting • Patients were studied in a complementary medicine clinic affiliated with an Israeli health maintenance organization.

Participants • Forty-eight patients were treated for allergic diseases with homeopathic remedies and conventional medications.

Main Outcome Measures • A computerized medication chart for each patient was evaluated for conventional medication consumption 3 months before and 3 months after the homeopathic intervention. Each patient served as his or her own control.

Results • Fifty-six percent of patients in this study reduced their use of conventional medication following the homeopathic intervention. Patients who used conventional medications for their allergic disorders reduced their medication expense by an average of 60%, with an average savings of $24 per patient in the 3-month period following the homeopathic intervention.

Conclusions • This retrospective outcome study demonstrates cost savings for an Israeli health maintenance organization. The homeopathic intervention led to a modest but significant reduction in the use of medications commonly used to treat allergic conditions and their complications. Larger controlled studies are needed to verify these findings. (Altern Ther Health Med. 2002;8(1):76-79)
are approximately 10% to 20%. In a recent survey of more than 4000 patients diagnosed with allergic rhinitis, 70% reported taking prescription medications to treat their allergy symptoms, yet 1 in 4 continued to experience symptoms.

With the increased popularity of complementary and alternative medicine, patients are looking for additional approaches and therapies to integrate into their healthcare. In a survey on the use of complementary medicine in Israel, allergic disorders were one of the main problems that led 19.4% of patients to seek advice from alternative practitioners.

Homeopathy was the leading treatment method for these disorders (28.3%). Homeopathy is currently widely practiced worldwide, especially in Europe, Latin America, and Asia. It is a controversial method based on the principle of similars, whereby highly diluted preparations of substances that can cause symptoms in healthy volunteers are used to stimulate healing in patients who have similar symptoms when ill.

Most scientists think homeopathy violates natural law and consign any positive response to the placebo effect. But results of a meta-analysis of 89 randomized, placebo-controlled trials of homeopathic remedies were not compatible with this assumption. Of these 89 studies, 9 had favorable responses in treating allergic diseases. Additional support for this observation comes from a recent randomized, controlled trial of homeopathy in perennial allergic rhinitis with 50 patients. This study suggests a significant objective improvement in nasal airflow in the homeopathy group compared with the placebo group. But this research is still considered insufficient evidence that homeopathy is efficacious for any single clinical condition.

The purpose of our study was to assess the cost savings of integrating homeopathic treatment with conventional medications in allergic patients in a health maintenance organization (HMO). We measured savings by comparing conventional medication consumption before and after the intervention.

METHODS

Setting
Charts from a complementary clinic were reviewed. The clinic is affiliated with General Health Services, the largest HMO in Israel. Patients were mostly self-referred and were evaluated by a conventional physician who was familiar with the variety of alternative treatments available in that clinic. This physician had 2 tasks: (1) to verify that no contraindications precluded the use of alternative therapies and no further evaluation or conventional treatment were needed, and (2) to help the patient choose the treatment that best suited his or her condition, following the patient as needed during treatment.

Participants
Patients were selected for study inclusion based on the diagnosis of an atopic condition during evaluation at the complementary medicine clinic (N=48). Data were obtained from patients’ charts between September 1997 and August 1998.

Intervention
Classical homeopathic treatment, in which 1 remedy was selected for each patient’s individual characteristics, was offered to those who presented with allergic disorders as their chief complaint. If selected by both patient and physician, homeopathy was administered by practitioners having at least 4 years of documented training in homeopathic medicine.

If chosen, homeopathy was the only alternative treatment administered. (When other alternative treatments were selected, patients occasionally received combination therapy, such as naturopathy plus reflexology.)

Homeopathy was considered complementary to conventional healthcare; patients continued their usual care with their primary care physicians in addition to their homeopathic remedies.

Main Outcome Measures
Each patient in the General Health Services has a computerized medication chart listing every product administered from any of the HMO’s pharmacies, including quantity and date. Both prescription and nonprescription medications are included.

Patients’ medication charts were accessed through this computerized system. Medications were selected for this study according to their relevance to atopic disorders and their complications: antihistamines, bronchodilators, decongestants, steroids, antibiotics, and others (such as mast-cell stabilizers or mucolytics).

Medication use was evaluated 3 months before and 3 months after homeopathic intervention. The cost of each patient’s medication was tabulated and a cost analysis was made before and after treatment for each patient in the study.

Data Analysis
Data were recorded and analyzed using the Statistics Package for Social Sciences (SPSS-PC, Release 8, SPSS, Inc, Chicago, Ill). Responses for questions with discrete outcomes were compared by means of chi-square tests. The Wilcoxon signed rank test was used to compare means and data before and after homeopathic treatment.

RESULTS
Forty-eight patients were eligible to participate in the study: 28 females (58%) and 20 males (42%). Mean age was 22±15.5 years (range, 2-55). There were significantly ($\chi^2 = 6.62, P = .01$) more males than females (57% vs 20%) in the younger age group (2-15), and more females (80% vs 43%) in the older age group (16-55).

Among the 48 participants (see Figure), 13 (27%) did not use any medications before or after the homeopathic intervention. Four (8%) patients did not use medication before the intervention, but were found to be using medications afterward.

Thirty-one (65%) patients were using medication before and after the intervention. Two (6%) increased their use of medications, 2 (6%) did not change their medication use, and 27 (56%) reduced their use of conventional medications.

Medications used by the study group before and after the intervention are presented in the Table. Patients used an average of 3.1 medications before the intervention and 1.6 afterward ($P = .001$).
The total cost of conventional medications for the 31 patients who were using them before the homeopathic intervention was 5351 New Israeli Shekels (NIS) ($1244 as of 1998) in a period of 3 months, an average of 172 NIS ($40) per patient. After the intervention, 35 patients were using medications, but their expense as a group was 2447 NIS ($570), or 70 NIS ($16) per patient, a drop of 60% in medication expense, or an average savings of $24 per patient for the 3-month study period ($P = .001$, Wilcoxon signed rank test).

Four patients did not use conventional medications before the intervention, but were found to use them afterward, for a total cost of 794 NIS ($185).

**COMMENT**

This retrospective outcome study demonstrates that a homeopathic intervention had a modest effect in reducing the amount of medications commonly used to treat allergic diseases and their complications. The study further showed that patients reduced their use of conventional medications by an average of 60% per patient during the 3-month period following the homeopathic intervention.

Medication use was reduced in 56% of patients and was significant in all medication categories used to treat allergic disorders and associated conditions. The most significant reduction was in the antihistamine category (70%), followed by reduction in the use of bronchodilators (55%) and steroids (50%).

An opposite trend was noted in 6 patients (12.5%) whose use of conventional medications increased following the homeopathic intervention. Four of these 6 patients did not take any medications in the 3-month interval before the homeopathic intervention. These 4 patients represented 23.5% of patients who were not taking any medication before the homeopathic intervention. These 4 patients may have experienced an increased aggravation of their condition and a need to use medications. In patients who were using conventional medications before the intervention, only 2 (6.4%) increased their medication use.

Some might argue that allergic diseases are too broad a topic to research and that one should concentrate on a specific condition (eg, allergic rhinitis or asthma), but these conditions are quite interrelated. Approximately 75% of patients with atopic dermatitis suffer from allergic rhinitis and more than 50% develop asthma.1

<table>
<thead>
<tr>
<th>Medication</th>
<th>Number of patients using medications*</th>
<th>% change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Before</td>
<td>After</td>
<td></td>
</tr>
<tr>
<td>Antihistamines</td>
<td>20</td>
<td>6</td>
</tr>
<tr>
<td>Bronchodilators</td>
<td>20</td>
<td>9</td>
</tr>
<tr>
<td>Steroids</td>
<td>19</td>
<td>9</td>
</tr>
<tr>
<td>Antibiotics</td>
<td>21</td>
<td>17</td>
</tr>
<tr>
<td>Decongestants</td>
<td>11</td>
<td>8</td>
</tr>
<tr>
<td>Others</td>
<td>6</td>
<td>3</td>
</tr>
<tr>
<td>Total</td>
<td>97</td>
<td>52</td>
</tr>
</tbody>
</table>

* Patients may have used more than one medication at a time.
Allergic rhinitis also has a very close link to asthma and sinusitis. In addition, because it is common to have hay fever, asthma, allergic rhinitis, and a tendency for recurrent sinusitis in the same patient, we decided to approach allergic diseases as a comprehensive condition in this preliminary study.

Others might argue that a control group is missing, but this was a retrospective, self-controlled, before-after trial. In self-controlled studies, subjects serve as their own controls, which prevents confounding by many characteristics that may influence the outcome.

We are aware that biases exist in this type of study; for example, changes that occur with time. But as Abramson\(^1\) mentioned, these studies may be appropriate in testing a treatment in patients with a refractory disease, such as allergy.

To our knowledge, no similar outcome study has been conducted in homeopathy. Additional indirect and direct data are needed to clarify the full picture of economic benefit, such as the number of visits to physicians or emergency departments, hospitalizations, school and work absenteeism, and reduced work productivity. But even with these limitations, the results of this preliminary study show a significant reduction in the use of medications with corresponding cost savings to the HMO.

In conclusion, this study demonstrates that a homeopathic intervention produced modest economic savings and modest reductions in the use of medications commonly prescribed to treat allergic conditions and their complications. Randomized, controlled trials on a larger scale with a prolonged follow-up period are needed to confirm homeopathy as another option in treating allergic disorders with a potential for reducing the use of conventional medications.

Acknowledgments
This work was supported by the General Health Services in Israel. We would like to thank Dr M. Levy and his staff from the General Health Services, Complementary Medicine Clinic, Tel-Aviv, Israel, for their essential cooperation and help for this study. We are grateful to Dr Zukerman and his staff from the General Health Services, Central Management, for obtaining the computerized data needed for this study, and to Dr Ada Tamir for her statistical help.

References