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Improvements in Chronic Diseases With a Comprehensive Natural Medicine Approach: A Review and Case Series

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Abstract

Approximately 40% of the US population report using complementary and alternative medicine, including Maharishi Vedic Medicine (MVM), a traditional, comprehensive system of natural medicine, for relief from chronic and other disorders. Although many reports suggest health benefits from individual MVM techniques, reports on integrated holistic approaches are rare. This case series, designed to investigate the effectiveness of an integrated, multi-modality MVM program in an ideal clinical setting, describes the outcomes in four patients: one with sarcoidosis; one with Parkinson's disease; a third with renal hypertension; and a fourth with diabetes/essential hypertension/anxiety disorder. Standard symptom reports and objective markers of disease were evaluated before, during, and after the treatment period. Results suggested substantial improvements as indicated by reductions in major signs, symptoms, and use of conventional medications in the four patients during the 3-week in-residence treatment phase and continuing through the home follow-up program.

Index Terms

complementary and alternative medicine; chronic disease; Maharishi Vedic Medicine; natural medicine

Chronic diseases are a major public health problem in the United States. Currently, the prevalence of chronic diseases is about 40% in the US population with approximately 100 million Americans suffering from at least one chronic disorder.¹ This high prevalence raises concerns about the efficacy and limitations of conventional healthcare approaches in preventing and treating these disorders.^{1,2} Such concerns may contribute to the increasing public and professional interest in alternatives to conventional modern medicine. Indeed, Eisenberg² reported that the use of unconventional or alternative therapies is widespread in the United States. For example, in 1990, approximately one third of the US population consulted alternative providers. These 425 million visits per year were more numerous than visits to primary care physicians.² Data from a 1997 report indicate even higher rates of complementary and alternative medicine utilization in the United States.³ However, despite

increasing public demand for complementary and alternative therapies, it has been noted that scientific data on safety and efficacy are often lacking.^{2,4-6}

This article reports a pilot study to investigate the potential clinical effectiveness of a comprehensive system of natural medicine, Maharishi Vedic Medicine (MVM), and examines the application of this approach when practiced as an intact multimodality system, as classically described.⁷⁻⁹ Vedic medicine is reported to be the oldest continuously practiced medical system, having its heritage in the ancient Vedic civilization of India.^{8,10-12} Vedic medicine, including Ayur-Veda, has been recognized by the World Health Organization as a sophisticated system of natural medicine with a detailed scientific literature comprising classical medical texts, an uninterrupted oral tradition of classical knowledge predating the written texts, a comprehensive *materia medica*, and a wide breadth of clinical procedures relevant to prevention and treatment of acute and chronic diseases.^{10,12} MVM is a modern revival of ancient Vedic medicine, taking into account an extensive range of diagnostic and therapeutic approaches in accordance with classical texts.¹³ These approaches are said to encompass mental, physical, behavioral, and environmental health.^{7,9,14,15}

Over the past 30 years, several hundred studies have been published on the efficacy, safety, and mechanisms of individual treatment components of MVM, such as the Transcendental Meditation program and certain herbal preparations.^{16,17} These studies suggest that specific approaches of MVM are associated with a lower risk of morbidity and mortality from chronic disorders.¹⁶⁻¹⁸ However, recent consensus guidelines for research on complementary and alternative systems have recommended that traditional systems of medicine be studied in their intact form as clinically used (rather than as isolated components) for clinical efficacy and overall safety.^{4,6,19} Indeed, synergistic effects among individual components are considered essential to the MVM approach to treatment and prevention of chronic diseases.⁹

Furthermore, it has been recently argued that the case study is a valuable method for preliminary studies of complementary and alternative medicine.²⁰ Therefore, this first case series was designed to begin to evaluate the clinical effectiveness of traditional multimodality MVM for the treatment of chronic disease. This report describes clinical outcomes in four patients treated with these protocols. The patients' conditions were (a) sarcoidosis, (b) diabetes/essential hypertension/anxiety disorder, (c) renal hypertension, and (d) Parkinson's disease.

METHOD

The four cases in this study were the first four patients presenting at the Centers for Chronic Disorders (CCD) who met the inclusion criteria of (a) presence of an adult-onset chronic disease, and (b) a reasonably high probability that we could follow them long-term. The intervention was provided by professionally trained staff at each clinic who were supervised by a physician trained and experienced in the practice of both modern family medicine and MVM for approximately 15 years before the present study.

Standard clinical signs, symptoms, and laboratory examinations for each disease were evaluated before, during, and after the treatment intervention. Clinic blood pressure (BP) measurements during the inpatient phase of our study were routinely taken in the morning at approximately 10 o'clock. Casual BP measurements during follow-up were taken at the patient's convenience. Times for prestudy BP measurements were not available in the patients' medical records (they were taken previously by patients' usual care physicians at various community medical facilities). A standardized quality-of-life assessment battery—the SF-36 general health, physical functioning, role-physical, and mental health subscales—was also administered to each patient before and after treatment.²¹

The multimodality MVM program studied in this series, was applied in the context of a 3-week program of in-residence care followed by a 3-month, home-based program. The key components of the program for all the patients included the following:

Transcendental Meditation and TM-Sidhi program

The Transcendental Meditation (TM) program has been widely practiced and extensively researched in previous literature.^{15,18} Meta-analyses^{22,23} indicate that effects of TM on several chronic disease risk factors appear to be larger than those produced by clinically devised or traditional relaxation programs. These include reductions in sympathetic arousal,^{24,25} smoking and excessive drinking,²⁶ psychosocial stress,^{24–28} and psychosocial cushioning factors.²⁸ Controlled trials show that TM reduces other physiologic risk factors and neuroendocrine contributors to chronic diseases.^{17,18,29,30}

The Transcendental Meditation technique was introduced in the West by Maharishi Mahesh Yogi about 40 years ago and is a primary approach of MVM for stress reduction and self-development.^{7,31} The TM technique is a simple procedure, practiced twice a day for 20 minutes while sitting comfortably with the eyes closed. The practice does not require any changes in personal beliefs, philosophy, or lifestyle. During the technique, the ordinary thinking process settles down and a distinctive psychophysiological state of “restful alertness” is gained. This is indicated by decreased respiration, skin conductance level, plasma lactate and cortisol, and increased frontal alpha and theta EEG power and coherence, increased cerebral blood flow, faster H-reflex recovery, and shorter latency of auditory-evoked potentials.^{27,32–35}

Pulse diagnosis

The MVM diagnostic approach to the patient includes a classical system of pulse diagnosis whereby the physician palpates the radial pulse to detect patterns that are classically described as corresponding with specific modes of physiological functioning and/or pathophysiological processes.^{8,36} Based on this assessment, as well as on history and clinical examination, the physician prescribed standardized protocols for diet, herbal preparations, physiological purification procedures, exercise, and daily and seasonal behavioral routines (see below).⁸ Participants were also taught a method of self-pulse reading to be used at home.

Vedic sound

Participants received Vedic sound therapy on a daily basis. This included listening to traditional recitations of selected portions of the classical Veda and Vedic literature, which have been suggested to correspond to specific areas of the human physiology and to promote homeostatic self-repair processes in those respective areas.^{7,8,14} The effects of Vedic sound programs may be consistent with modern conceptualizations of the effects of different types of music and sound on the autonomic nervous system and other psychoneurophysiologic processes.^{37,38} Although Vedic sound therapy has been classically recommended, this is, to our knowledge, the first report on the use of Vedic sound therapy in a multimodality traditional Vedic medicine program for the treatment of chronic diseases.

Diet

A traditional Vedic medicine diet was provided in residence and recommended for outpatient follow-up. This diet emphasized fresh vegetables, fruits, grains, nuts, high-fiber content, and dietary sources of antioxidants, vitamins, and minerals; it is similar to other therapeutic diets previously associated with reduced morbidity and mortality from chronic diseases.^{39–41} Within this broad context, each patient’s diet was tailored to compensate for his or her specific physiological imbalances and pathophysiological processes.

Herbal preparations

Herbal preparations from the traditional Ayur-Vedic materia medica were utilized according to clinical indications.⁴² These preparations have been used extensively in traditional and modern clinical settings.^{8,43} Because of putative synergistic effects,⁴⁴ multiple herbs are often combined in a single preparation. Thus, each herbal preparation used in the present trial contained up to 20 individual herbs and fruit extracts. One example is Maharishi Amrit Kalash, which has been evaluated for its antioxidant properties.^{8,16,45}

Physiological purification procedures

The in-residence phase of the program included a series of classical Vedic medicine physical therapies used for physiological purification.^{8,46–48} These therapies are described as eliminating waste products and toxins (eg, oxidized lipids) that accumulate over time from improper diet, poor digestion, stress, and other factors that may obstruct the flow of the body's "inner intelligence."^{8,49}

These treatments were provided in daily sessions of approximately 3 hours' duration and included previously standardized therapies that were prescribed according to the clinical indications of each patient, including specific herbalized oil massages, external heat applications, herbalized steam baths, warm oil applications, and gastrointestinal elimination therapies.^{8,49}

Vedic exercise

Participants were instructed to practice a set of classical Vedic exercises for approximately 10 to 15 minutes twice a day. These exercises have been used in traditional Vedic medical practice for treatment of disease and promotion of health, especially for mind-body integration¹⁴ and are derived from the Yoga aspect of MVM. These included yoga stretching and slow breathing exercises. Previous research studies on these Vedic exercises have found significant reductions in cardiovascular risk factors and in stress-related neuroendocrine markers, and enhanced psychological health.^{50–52}

Environmental health—effects of the near environment

Analysis of the influence on health of the patient's home and work environments is based on the classical texts of Vedic architecture called Maharishi Sthapatya-Veda.^{7,8,13} This field includes knowledge and practices for the beneficial orientation and layout of homes and office buildings. This approach is consistent with the principles of the recently described syndrome of building-related illness or "sick-building syndrome,"⁵³ although MVM's principles and practice extend beyond considerations of materials' toxicity, ventilation, and so forth. Each participant in the program received an analysis of his or her home and work environments, and recommendations were made based on this analysis.

Environmental health—effects of the distant environment

The Vedic approach to the patient considers that the individual is in a dynamic state of equilibrium with the entire environment, extending to the universe as a whole, including the influences of the cycles and rhythms of the sun, moon, stars, and planets. This may correspond in part to modern understandings of chronobiology.⁵⁴ The current program included assessment of risk factors, future health trends and recommendations for prevention derived from this traditional approach.⁷

Collective health

Previous research has shown that practice of the Transcendental Meditation program and its advanced program (the TM-Sidhi program) in groups has beneficial effects on health.^{15,55} Group meditation was recommended for participants in this study.

RESULTS

Case 1: Sarcoidosis

A 56-year-old White female patient presented to the CCD in Dallas with classic signs and symptoms of multisystem Stage II sarcoidosis (see Table 1). Nine months previously, the patient had noted the appearance of bilateral olecranon masses. Two months later, she began to experience severe fatigue, dyspnea on exertion, malaise, arthralgias, myalgias, episodic iritis, and other symptoms that substantially reduced her quality of life. The patient was evaluated in early June 1997 at an academic medical center in New Orleans, where chest radiography and a CT scan revealed mediastinal and hilar lymphadenopathy, multiple pulmonary nodules, interstitial pulmonary findings, and a mass in the region of the porta hepatis. Tomograms of the kidneys, ureter, and bladder revealed renal calculi. Blood chemistries revealed elevated levels of angiotensin converting enzyme (ACE) (195, normal 17–70 units/L); erythrocyte sedimentation rate (ESR) (27, normal 0–20 mm/min), and C reactive protein (CRP) 1.2 (normal 0.2–0.8 mg/dL). The diagnosis of sarcoidosis was made when biopsy of pretibial skin lesions revealed noncaseating granulomatous dermatitis. The patient refused oral corticosteroid therapy but did consent to intermittent ophthalmic steroid drops.

A physical exam revealed an obese woman (220 lbs) complaining of worsening symptoms. The lungs were clear. Multiple small nodules were noted over both eyelids and olecranon masses were noted bilaterally. Small non-nodular erythematous skin lesions were noted over the left proximal anterior tibia and dorsum of the right foot. Screening biochemistries were normal except for the ESR, which was elevated at 85 mm/min (normal 0–30 mm/min).

After admission to the center, the patient underwent a 26-day course of traditional Vedic medicine therapy as described above.

During treatment, the patient reported diminished joint and muscle pains and improvement in her breathing. By discharge (Day 27), the olecranon masses and eyelid nodules had decreased and she reported improvements in breathing, energy, and physical exertion, and decreases in fatigue and other symptoms. The ESR and CRP levels had fallen. The ACE value was essentially unchanged. A chest radiograph showed diminution in bilateral hilar adenopathy. The patient also improved significantly on the standardized self-assessment battery SF-36.

The patient was placed on a home-care program including dietary recommendations and herbal food supplements, and continued to improve. One month postdischarge, a CT chest scan at the center in New Orleans showed a decrease in size of hilar and paratracheal lymph nodes and improvement in interstitial disease. Pulmonary function tests revealed mild small airways obstruction with normal diffusion capacity and oximetry. Skin lesions were noted to be resolving, olecranon masses and eyelid nodules were substantially reduced in size, and no clinical evidence of iritis was found. Previously abnormal ESR and CRP values were all reduced and ACE values had decreased substantially. Eight months after treatment, the patient remained free of dyspnea, iritis, fatigue, and other symptoms. Physical examination revealed resolution of olecranon masses and eyelid nodules.

Eighteen months after discharge, the patient remained free of dyspnea, iritis, fatigue, fevers, and other symptoms. She had normal energy and reported being able to engage in vigorous

activity (eg, shoveling earth in her garden) without shortness of breath or fatigue. Physical examination revealed complete resolution of olecranon masses, skin rashes, and eyelid nodules.

Case 2: Diabetes Mellitus, Essential Hypertension, Anxiety Disorder

A 55-year-old White male presented for admission to the Dallas CCD with diagnoses of non-insulin-dependent diabetes mellitus (of 12 years' duration), hypertension (20 years), and anxiety disorder (20 years) (Table 2). His diabetes had been managed on diet therapy alone until 3 years prior to admission, at which time he started glyburide and metformin. Home fingerstick fasting blood sugars (mean 212 mg/dL for 30 days prior) and hemoglobin A_{1C} values (8.4 units 1 week prior) were elevated preceding admission. His body weight was low-normal at 147 pounds (height 69 in). There was no history of diabetic complications. The patient had a history of Stage 1 hypertension treated with an ACE inhibitor (enalapril) for 2.5 years. A 2-week trial off medication 5 months before admission had resulted in return of elevated blood pressure levels (160/90 mm Hg). For the preceding 20 years, the patient had panic disorder with depressive features, which was treated with sertraline for the 2 years preceding admission.

Following admission, the patient began a 21-day in-residence program of treatment, which included the MVM components described above. His blood pressure was in the range of 100–115/60–75 during the first 3 days and enalapril was tapered and then discontinued on Day 6. The blood pressure levels remained in the low-normal range without medication throughout the remainder of the treatment program (Days 12–21). Daily fasting blood sugars also decreased substantially (see Table 2). Two-hour postprandial blood sugars were 143 on Day 13 and 137 on Day 20. The decreases in blood sugar occurred even though metformin was tapered fourfold by Day 12. The patient's mood improved considerably during the course of treatment, and anxiety and depression were absent. Sertraline was discontinued on Day 13. Evaluation of SF-36 indicated improvements in the general health subscale, the mental health subscale, the composite physical outcome score, and the composite mental outcomes score.

At discharge, the patient was asymptomatic and was placed on a home regimen of dietary therapy, herbal supplements, the Transcendental Meditation and TM-Sidhi program, Vedic daily health routine, and exercise. He was also instructed to continue glyburide 2.5 mg and metformin 500 to 1000 mg daily. A follow-up hemoglobin A_{1C} test at 3 months showed a significant decrease (7.4 units) that appeared to reflect the reduction of blood sugar levels during the preceding 90 days. The blood pressure readings and mood remained normal off medication 3 months postdischarge.

Case 3: Renal Hypertension

A 47-year-old woman presented to the CCD in Chicago with a 30-year history of hypertension from renal parenchymal disease secondary to obstructive uropathy. At age 17, the right ureter was surgically repaired. According to medical records, her blood pressures were in the Stage I–II hypertension range for most of her adult life. During the 2 months before admission, she averaged 146/97 mm Hg home BP.

On admission, the patient's physical examination and routine blood and urine biochemistries were normal, except that creatinine clearance was reduced to 67 mL/min, and office BP was 150/105 mm Hg. During the 3 weeks of the in-residence program, BP remained essentially unchanged. However, creatinine clearance at discharge was 85 mL/min (within the normal range).

Follow-up during the 2 months immediately after discharge revealed that home BP had decreased to an average of 129/85 mm Hg without medication. Improvements in quality of life were reported on the SF-36 (see Table 3).

One year later, the patient continued to be normotensive without medication, with home BP during the 12th postdischarge month averaging 130/84 (average of 8 readings).

Case 4: Parkinson's Disease

A 49-year-old woman diagnosed with Parkinson's disease (PD) at the age of 41, and treated regularly by a neurologist since that time, presented for admission to the Dallas CCD (see Table 4). On carbidopa-levodopa for the preceding 5 years (CR preparation), symptoms had recently worsened. Despite her use of the long-acting drug preparation, she reported that the carbidopa-levodopa effect wore off after 3 to 4 hours. Selegiline and bromocriptine were tried, but the patient was unable to tolerate these because of adverse drug reactions. In the month before admission, the patient reported increasingly frequent episodes of freezing-up, immobility, and other symptoms. Following admission, the patient began a 21-day in-residence program, which included the MVM components described above.

During treatment, the CCD medical staff observed that the patient showed significant generalized improvement (eg, markedly reduced dyskinesia, improvements in gait, speech, handwriting, and postural stability). These improvements continued until discharge. The patient also showed improvement in the SF-36 health battery.

The patient was evaluated twice by a neurologist after completing the program. On the Short Parkinson's Evaluation Scale, the patient showed noticeable improvement in gait, postural stability, and dyskinesia. The patient had experienced some increase in tremor during this period and was taking carbidopa-levodopa 700 mg daily.

The patient returned to the CCD for two subsequent 21-day courses of therapy, at 4 months and 11 months, respectively, after discharge from the first treatment. During these subsequent treatments, freezing episodes ceased and further improvements in tremor, fingertapping, handwriting, gait, and postural stability were noted. Carbidopa-levodopa was reduced to 600 mg. Subsequent evaluation by her usual-care neurologist following discharge from each of these programs (2 weeks and 6 weeks, respectively) demonstrated further improvement on the Short Parkinson's Evaluation Scale. The Short Parkinson's Evaluation motor subscale score decreased markedly to 4 after the second course of treatment and to 3 after the third course. The complications of therapy subscale decreased to 1 and then to zero. Both the mental subscale and activities of daily living subscale decreased to zero and remained at this level after the third treatment course. Further improvement in the SF-36 battery was also noted after each of these treatment programs. Three months after discharge from the third treatment course, she continued on carbidopa-levodopa 600 mg per day and reported she was maintaining these improvements in function and quality of life.

COMMENT

The present series of patients with sarcoidosis; diabetes essential hypertension, anxiety disorder; renal hypertension; and Parkinson's disease demonstrated a range of clinically significant improvements after participating in an intensive multimodality program of traditional natural medicine—MVM. These findings extend previous controlled studies on individual modalities of MVM, which have shown reductions in chronic disease risk factors as well as morbidity and mortality from a range of chronic diseases.^{15–18,56–58}

The present study used an integrated set of diagnostic and therapeutic modalities, as is traditionally used in the classical Vedic medicine approach to the treatment of chronic disorders. The approach of studying traditional systems as intact multimodality systems has been recommended in recent consensus guidelines for research on complementary and alternative medicine.^{4,6,19} However, to our knowledge, this is the first report in current medical literature of the application of Vedic medicine in its complete, traditional form for the treatment of chronic diseases.

The prognosis of sarcoidosis typically depends on the stage of the disease and on other clinical factors.⁵⁹ The present patient was Stage II (pulmonary interstitial disease and hilar adenopathy) with four of seven clinical markers of poor prognosis.⁵⁹ At the time of admission, her symptoms were worsening. Conventional treatment with cortico-steroids may reduce symptoms but is associated with substantial adverse effects and risk for iatrogenic disease.⁶¹ Although the physiological mechanisms for the presumed regression of the sarcoidosis were not evaluated in this study, modulation of immune functioning may have contributed to the overall therapeutic effect. Immunomodulatory effects have been reported elsewhere for various MVM modalities.^{61–63}

Several of the MVM modalities used have previously been reported to have antihypertensive effects and may have contributed to the observed reductions in BP in both the primary and secondary hypertension cases in this series. For example, previous research has reported that the Transcendental Meditation technique and the advanced TM-Sidhi program are effective in the treatment of essential hypertension.^{23,64,65} Also, several Vedic herbal preparations, as well as certain yoga exercises, have been found to reduce cardiovascular risk factors, including BP.^{41,66,67} These effects may be mediated in part through the sympathetic nervous system and related neuroendocrine factors. In addition, the improved creatinine clearance in the patient with renal parenchymal hypertension suggests improvement in renal function, perhaps through enhanced renal blood flow.⁶⁸ The present approaches are consistent with the recommendations of the Joint National Committee for nonpharmacological treatment of hypertension as initial or adjunctive therapy for patients with hypertension.⁶⁹ This alternative program may obviate or mitigate the need for pharmacologic therapy that is frequently associated with adverse effects, relatively high cost, and low compliance over the long-term.^{23,57,69–71}

Previous data on herbal preparations and stress reduction approaches included in the MVM chronic disorders program suggest that these may have contributed to the improved glucose tolerance in diabetes mellitus^{71,72} documented in the present study. In addition, the therapeutic diet in this program included features consistent with current recommendations for nutritional treatment of diabetes—emphasizing generous amounts of complex, unrefined carbohydrates and fiber, while restricting total fat to less than 20% to 25% of total energy consumed.⁷³ Protein sources included low-fat milk, legumes, and lean cuts of poultry. Lunchtime was recommended as the largest caloric intake, and complex carbohydrate snacks were provided to meet energy needs when appropriate.

Regarding anxiety, one randomized, controlled study found significant improvements in psychiatric patients with anxiety disorder through use of the stress-reduction component of MVM.⁷⁴ In addition, a previous meta-analysis reported on the distinctive effectiveness of the Transcendental Meditation technique in reducing anxiety compared with other behavioral approaches for stress reduction.²²

Parkinson's disease is chronically progressive with no known reports of spontaneous remission.⁷⁵ Treatment with dopamine mimetics modulates symptoms but is usually time-limited in effectiveness;⁷⁶ therefore, it appears that the short- and long-term improvements in our patient's signs and symptoms are noteworthy. These data are consistent with cohort studies

reporting substantial reductions in the rates of serious neurological diseases in long-term participants in MVM programs.^{17,56}

The results of these four cases are generally consistent with epidemiologic findings of reduced prevalence rates (indicated by hospital admission rate) among MVM users for immune-endocrine-metabolic disorders, cardiovascular disease, and neurological disorders.^{17,56} Furthermore, these initial findings confirm and extend a pilot study of 126 patients in Europe, which reported clinical improvements in several chronic disorders—including diabetes, hypertension, asthma, chronic bronchitis, rheumatoid arthritis, eczema, chronic constipation, and headache.⁷⁷ In this earlier series of cases, patients were treated with several, although not all, of the Vedic modalities used in the current case series.

In terms of a theoretical model, MVM traditionally describes the underlying mechanism of action of these therapeutic procedures as enlivening the body's "inner intelligence."⁷ The latter is proposed to be the fundamental set of organizing principles at the basis of physiological function and structure. The concept of inner intelligence from the ancient Vedic perspective may be similar to Cannon's wisdom of the body.⁷⁸ The common principle is that the body contains an abstract "wisdom" or "intelligence" that coordinates and balances the functioning of the entire physiological system.

Vedic medicine approaches have been proposed to enliven or restore this fundamental level of intelligence in the body. This process, in turn, is proposed to result in the optimizing of innate, homeostatic, self-repair and defense mechanisms and improvements in chronic disease. Because it focuses on procedures to stimulate endogenous restorative mechanisms, the traditional Vedic approach to health may also avoid adverse effects commonly seen with more conventional pharmacologic and surgical interventions.^{7,9}

The knowledge and technologies of MVM are based on the understanding that the orderly structure and function displayed in human physiology is based on laws of nature that also structure and govern the entire physical universe.⁷ MVM includes 40 approaches that derive from the 40 traditional branches of the Veda and Vedic literature.¹³ The different aspects of Vedic literature are classically understood as describing different modes of functioning of natural law; the Veda and Vedic literature as a whole are traditionally held to contain the total knowledge of natural law.¹³ In recent theoretical modeling, Nader⁷ has related these divisions of the Vedic Literature to 40 major systems of human anatomy and physiology. This discovery provides a theoretical framework for the therapeutic strategies of MVM.

For example, MVM therapies may be selected from specific aspects of the traditional Vedic literature on the basis of the correspondence of those aspects with areas of the body involved in the disease process. In selecting Vedic sound therapy for the Parkinson's patient, the clinician chose Vedic sounds that are described as corresponding to functioning of the basal ganglia, particularly the substantia nigra. In this light, it is notable that most of the patients in this study reported that the Vedic sound therapy component of the program was often associated with immediate and dramatic relief from clinical symptoms. Patients reported such experiences as the following: "During Vedic sound therapy, I experienced profound inner silence and a sense of orderliness in mind and body that seemed the essence of healing. Following each session, my symptoms were clearly reduced." These results are consistent with a recent series of randomized, double-blind, controlled trials on the efficacy of a related Vedic vibration therapy approach that reported immediate and significant improvements in several chronic neurological and musculoskeletal disorders.¹⁴ Nader suggests that the correspondence between the Vedic literature and the areas of human physiology account for these effects.^{7,}

¹⁴ Previous data on effects of music and sound therapy on mental and physical health may be

consistent with the posited effects of specific sounds on specific physiological functions.^{37, 38}

Findings from earlier studies suggest that some of the mechanisms of the MVM multimodality program are general, that is, through reduction of generalized stress responses (eg, neuroendocrine stress and oxidative stress^{29,45}), whereas other mechanisms may be disorder-specific. Yet, from the traditional Vedic perspective, both general and disease-specific mechanisms are considered interdependent and synergistic.⁷ This concept remains to be more thoroughly tested in controlled experimental settings. Recent recommendations for conventional multimodality treatment and prevention approaches—including lifestyle modification of chronic diseases, such as cardiovascular disease—suggest modern parallels to this traditional approach.

In addition to direct effects on physical disease processes, components of the MVM approach have been shown to have effects on cognitive abilities and mood.⁷⁹ These enhancements may contribute to improved self-care, including adoption of positive health-promoting behaviors and avoidance of negative behaviors.⁸⁰

It is unlikely that the present findings can be attributed to significant placebo effects. Three of the patients in this series had undergone several courses of modern medical therapy before their participation in the Vedic medicine programs. Patients' previous treatments were often intensive in terms of attention and demand characteristics, yet these did not result in sustainable relief from symptoms or long-term objective improvement. Thus, the previous courses of modern medical therapy may be considered as control periods for the study intervention periods in this case series.

In conclusion, it may be noted that Eisenberg et al reported that patients' reasons for seeking alternative or natural medical therapies include "(1) patients are seeking health promotion and disease prevention; (2) conventional therapies have been exhausted; (3) conventional therapies are of indeterminate effectiveness or are commonly associated with side-effects or significant risk; (4) no conventional therapy is known to relieve the patient's condition; (5) the conventional approach is perceived to be emotionally or spiritually without benefit."⁸¹ (p The present series of cases with a range of chronic diseases, together with the previous literature on individual MVM modalities, suggests the potential of MVM, a traditional and comprehensive approach to natural medicine, to respond to the perceived healthcare needs of selected patients with chronic diseases. Given the social and individual burden of chronic disease in contemporary society,^{1,81} we suggest future research with controlled experimental designs and long-term follow-up to evaluate further the potential effectiveness and mechanisms of these natural medicine programs.

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TABLE 1

Patient Measurements Before and After Application of a Comprehensive Natural Medicine Regimen to Treat Sarcoidosis

Outcome measure	Pre-treatment I ^a	Pre-treatment II ^b	Post-treatment I ^c	Post-treatment II ^d	Post-treatment III ^e	Normal range
CT scan						
Right paratracheal node	1.6 × 2.2	—	—	1.4 × 1.9	—	—
Subcarinal node	2.1 × 4.8	—	—	1.3 × 3.2	—	—
Dominant lung nodule (RLL)	1.9 × 2.7	—	—	1.9 × 2.7	—	—
Porta hepatis mass	4.4 × 5.4	—	—	4.2 × 5.4	—	—
Olecranon masses (cm)	—	8 × 7	5.5 × 4.5	—	0 × 0	—
Left	—	4 × 4	3.5 × 3.5	—	0 × 0	—
Right	—	Present	Diminished	Absent	Absent	—
Eyelid nodules	Present	Dyspnea and wheezing after flight of stairs	No dyspnea or wheezing after 2 flights of stairs	No dyspnea or wheezing after 2 flights of stairs	No dyspnea or wheezing after 2 flights of stairs	—
Functional respiratory status	—	—	—	—	—	—
ACE levels (units/L) ^f	195	—	186	119	—	17–70
SF-36 subscales ^g	—	—	—	—	25.9	8–52
General health	—	45	67	—	—	71.95 ± 20.3
Physical functioning	—	40	80	—	—	84.15 ± 23.3
Role-physical	—	0	100	—	—	80.96 ± 34
Mental health	—	52	84	—	—	74.74 ± 18.1

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^aMeasurements performed at an academic medical center (New Orleans) before admission to the Center for Chronic Disorders (CCD).^bMeasurements performed on admission to CCD (Dallas).^cMeasurements performed on discharge from CCD (Dallas).

TABLE 2

Patient Measurements Before and After Application of a Comprehensive Natural Medicine Regimen to Treat Hypertension, Diabetes, and Anxiety

Outcome measure	Pretreatment I^a	Posttreatment I^b	Posttreatment II^c
Systolic BP (mm Hg) (nl < 140)	122 ^d	115 ^c	122 ^f
Diastolic BP (mm Hg) (nl < 90)	86 ^d	71 ^e	79 ^f
Anti-hypertensive medication	Enalapril, 5 mg. q.d.	None	None
Fasting blood sugar (mg/dL)	212 ^g	119 ^h	134 ⁱ
Hemoglobin A _{1C}	8.4		7.4
Hypoglycemic medications (daily dose)	Metformin 2000 mg; Glyburide 2.5 mg	Metformin 500 mg; Glyburide 2.5 mg	Metformin 1000 mg; Glyburide 2.5 mg
Psychotropic medication	Sertraline, 25 mg. q.d.	None	None
SF-36 subscales ^j			
General health	35	60	71.95 ± 20.3
Physical functioning	80	95	84.15 ± 23.3
Role-physical	75	100	80.96 ± 34
Mental health	52	76	74.74 ± 18.1

^a On admission to the Center for Chronic Disorders (CCD).

^b At discharge from CCD.

^c Three months postdischarge from CCD.

^d Average of 8 readings over 6 months before admission (on Enalapril, see column two).

^e Average daily readings over last 10 days of treatment (off anti-hypertensive medication).

^f Average of 8 readings over 3 months after discharge (off anti-hypertensive medication).

^g Average of daily readings for 30 days before admission.

^h Average of daily readings for last 10 days of treatment.

ⁱ Average of daily values during third month postdischarge.

^j Normal range are means ± SD.

TABLE 3

Patient Measurements Before and After Application of a Comprehensive Natural Medicine Regimen to Treat Renal Hypertension

Outcome measure	Pre-treatment	Post-treatment I	Post-treatment II	Normal range
Systolic BP (mm Hg)	146 ^a	129 ^b	130 ^c	< 140
Diastolic BP (mm Hg)	97 ^a	85 ^b	84 ^c	<90
24 h creatinine clearance (mL/min)	67 ^c	85 ^d	—	80–120
SF-36 subscales ^f				
General health	72	95	—	71.95 ± 20.3
Physical functioning	80	95	—	84.15 ± 32.3
Role-physical	25	100	—	80.96 ± 34
Mental health	88	92	—	74.74 ± 18.1

^a Average of 20 readings taken over 2 months before admission to the Center for Chronic Disorders (CCD).

^b Average of 26 readings taken over 2 months after CCD discharge.

TABLE 4

Patient Measurements Before and After Application of a Comprehensive Natural Medicine Regimen to Treat Parkinson's Disease

Outcome measures ^f	Pre-first treatment ^g	Post-first treatment ^b	Pre-second treatment ^c	Post-second treatment ^d	Post-third treatment ^e
I. Motor evaluation total score	14	11	12	4	3
II. Complications of therapy total score	9	1	5	1	0
III. Mental total score	1	0	0	0	0
IV. Activities of daily living total score	10	4	5	0	0
V. Hoehn & Yahr stagings ^g	3	2	2	2	2
VI. Scoring of motor fluctuations ^h	C	A	B	A	A
SF-36 subscales ^f					
General health	55	87	—	72	77
Physical functioning	45	55	—	65	80
Role-physical (RP)	25	75	—	75	100
Vitality	40	45	—	30	55
Physical summary	34.48	43.48	—	43.82	52.18

^a On first admission to the Center for Chronic Disorders (CCD).

^b 6 weeks after first CCD program.

^c On second admission to CCD.

^d 2 weeks after second CCD program.

^e 6 weeks after third CCD program.

^f I-VI are from Rabey et al. Evaluation of the Short Parkinson's Evaluation Scale: A new friendly scale for the evaluation of Parkinson's disease in clinical drug trials. *Clinical Neuropharmacology*. 1997;20:322-337. Except for V and VI, scores for individual items ranged from 0 (*no disease*) to 3 (*severest disease*).

^g 0 = no signs of disease; 1 = unilateral disease; 2 = bilateral disease; 3 = some postural instability, mild-moderate bilateral disease, physically independent; 4 = severe disability but still able to walk or stand unassisted; 5 = wheelchair bound or bedridden unless aided.

^h A = no motor fluctuations or dyskinesias; B = dyskinesias and/or akinetic episodes and/or freezing gait that affect daily life; C = dyskinesias and/or akinetic episodes and/or freezing episodes that affect daily activities; D = dyskinesias and/or akinetic episodes and/or freezing gait that significantly affect activities of daily life; require considerable assistance for activities of daily life.