

*Prikazi bolesnika/
Case reports*

CASE SERIES OF CHRONIC DISEASES
TREATED BY MACROBIOTICS

STUDIJA SLUČAJEVA HRONIČNIH BOLESTI
LEČENIH MAKROBIOTIKOM

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Abstract

Key words

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Ključne reči

makrobiotika, tradicionalna medicina,
ishrana, hronične bolesti

Macrobiotics is a holistic approach to health based on proper nutrition, active lifestyle and spiritual development. Macrobiotics is also a method of treatment in traditional medicine. Although most popularized in patients with cancer, macrobiotics is even more effective in the prevention and treatment of various chronic diseases. This paper presents the results of successful treatment of 19 patients with various diseases (liver and digestive system, hormonal disorders in women, chronic ear inflammation, eczema, mild renal insufficiency, hypertension and overweight). Macrobiotics was used in 16 patients as the only method of treatment, and in 3 cases as a complementary method. The results of this study show great potential in the treatment of chronic diseases by macrobiotics, without side effects and a significant increase of quality of life.

INTRODUCTION

The main goal of macrobiotics, as a holistic approach to life, is to satisfy natural needs of humans. Traditional nutrition based mainly on plant whole foods, physical activity, personal development and contact with the nature are the fundamental staples of macrobiotics. Important objectives of macrobiotics are, also, preservation of the nature and the creation of a peaceful psychosocial surrounding, because the health of every individual is strongly related to the living environment.

The idea of achieving the highest quality of life has been present in all civilizations. Therefore, the macrobiotics is a world heritage. The term macrobiotics (gr. makros - large, bios - life) was first used by Hippocrates, and the idea of macrobiotics was developed in Europe by Dr. Christoph Hufeland. His book "Macrobiotics - the art of longevity" was published in the late 18th century ⁽¹⁾. Contemporary macrobiotics comes from Japan and can be considered as an extension of traditional Chinese philosophy and medicine, since it is based on the same principles (vital force - qi, yin and yang and five energy transformation). The specificity of the macrobiotics refers to nutritional pattern, which is in accordance with Japanese tradition.

The most prominent teachers of macrobiotics, George Osawa and Michio Kushi (at the beginning and the mid-twentieth century, respectively) connected improper diet, the modern way of life and devastation of the environment with the most common diseases of our time.

Macrobiotics was highlighted four decades ago, when many people implementing this lifestyle, cured of various diseases, including cancer ⁽²⁻⁴⁾. Macrobiotics has become particularly popular as an alternative approach to cancer treatment. However, decades of practise enabled evaluation of the real potential of macrobiotics in patients with malignant diseases. Weiger et al. ⁽⁵⁾ from the Harvard Medical School have proposed macrobiotics as complementary therapy in the treatment of cancer. In a recent review on the macrobiotic diet in chronic diseases, Lerman says that carefully planned macrobiotic diet, as part of a healthy lifestyle, may be effective in the prevention of obesity, cardiovascular diseases, diabetes and cancer. It can also be a curative method in all these conditions ⁽⁶⁾. Most scientific papers on the effectiveness of macrobiotics as a therapeutic method concluded that there was a need for more study and research.

The first objective of this study was to present a series of cases of various chronic diseases in which macrobiotics had been successfully applied as a method of treatment. Another objective was to determine the compliance to the different parts of holistic practise (nutrition, physical activity, personal development) and to determine if the life quality of the patients had been improved.

METHODOLOGY

a / Methodology of the work with patients

Patients came to the consultation which included a detailed medical history, review of medical records, examination using Oriental diagnosis (7, 8), explanation of the macrobiotic principles with the emphasis on nutrition, recommendations for healthy lifestyle, physical activity, self massage technique DO IN (9), relaxation techniques and creative visualization (10), body care, advice on traditional medicinal drinks (11) and other liquids. Afterwards, a personal menu was issued in accordance with macrobiotic doctrine (11) with some modifications based on nutritional guidelines (European Food Safety Agency, www.efsa.europa.eu) when necessary. Patients who had medical records and conventional medical therapy were advised to visit their physicians on regular basis and to monitor the results of changing the lifestyle by diagnostic methods of conventional medicine. The therapeutic regimen prescribed by a doctor was not changed, nor patients were advised to exclude therapy by themselves. Patients were instructed to measure body weight and to report changes of their overall condition, as well as all new findings and changes in treatment regimens of conventional medicine. In some cases, macrobiotic recommendations and menus were changed according to new condition. Patients were followed up for at least 6 months.

Body mass index (BMI) was recorded during the follow up period and caloric intake was adjusted when necessary. Evaluation of the use of macrobiotics as a therapeutic method was performed using the diagnostic methods of conventional medicine and the Oriental diagnosis. Assessment of the compliance and evaluation of quality of life improvement was determined by questionnaire (Table 1).

b / Methodology of patients' choice in this case series

This paper presents the representative cases from the period 2003. – 2008. Terms of inclusion in the study were as follows: patients diagnosed with various chronic diseases, excluding cancer, who consistently applied individually prescribed macrobiotic lifestyle and personal menus, and who had conventional medical records completed.

RESULTS

Outcomes of the 19 patients treated by macrobiotics are presented in the table 2.

At the beginning of treatment, overweight was observed in 9 of 19 patients (47,4%). The remaining patients were of normal weight. Carefully planned menus resulted in preservation or achievement of normal body mass index (BMI). In patients with impaired liver function and abnormal laboratory parameters (bilirubin, cholesterol, AST, ALT and Gamma GT) there was a normalization of laboratory findings, except in the case of probable hereditary hypercholesterolemia, which was reduced. Only 3 patients out of 19 (no. 8, 9 and 10) used the conventional medical therapy prior to macrobiotics and continued together with the implementation of the macrobiotic treatment. After several months, in two cases treatment was terminated by the doctors of conventional medicine (no.8 and 10), and in one case continued (no.9). Patient I.Š. (no.9) used Salazopirin a long time before applying macrobiotic lifestyle, but the improvement appeared with the introduction of macrobiotics. Four patients with various hormonal disorders causing menstrual disorders or infertility, balanced hormonal status solely by macrobiotics, which in two cases resulted in desired pregnancies.

Results of a questionnaire, which are of importance for this study, are presented in the tables 3 and 4. All patients applied advices on nutrition more than 90%, about 50% of the patients underwent desirable physical activity and only 25% of patients seriously dealt with methods of personal development, including mental and relaxation exercises.

All patients evaluated that their quality of life increased at least 50% and 30% of them qualified improvement more than 90%.

DISCUSSION

A holistic approach to health, including macrobiotics, differs from allopathic medicine. In macrobiotics, patients undertake personal participation and responsibility, ie. commitment to a healthy lifestyle. Necessary motivation and discipline in implementing the advices are hardly verifiable, because the application takes place at home. Furthermore, although the health effects of macrobiotics are evident at the physical level, as showed in this study by the diagnostic methods of conventional medicine, the most important effects of the treatments are performed in the energy system (acupuncture and chakra system) and higher levels of consciousness, expressed through the general tendency to homeostasis, as well as psychological and spiritual maturation. Holistic methods of treatment lead to significant reduction of stress - one of the most important risk factors for all chronic degenerative dis-

eases. Therefore, evidence based understanding of macrobiotics as a therapeutic method is not easy.

The results of questionnaire showed that the success of therapy in this study was mainly due to changes of nutritional habits. Macrobiotic recommendations are based on traditional Japanese nutritional pattern. The basic proportions of the macrobiotic diet are 35 to 50% of whole grains, 25 to 35% vegetables, 5 to 10% of vegetable soup sometimes mixed with beans and grains, 5 to 10% legumes, 5% of animal foods (mainly fish). Fruits, seeds, nuts, vegetable oils, seaweed and various other supplemental foods make up the rest (6). Acceptance of a macrobiotic diet in the world was expected, thanks to the awareness of the long life span of Japanese. Following the popularization of macrobiotics in seventies and eighties of the twentieth century, many years later, two more traditional nutritional systems (Mediterranean and Okinawa diet - MD and OD respectively) attracted the attention of the scientific community, again thanks to the longevity of their adherents and a low risk of age-associated degenerative diseases.

Since Okinawa is the southernmost prefecture of Japan, macrobiotic diet is the most similar to this version of the traditional nutritional pattern. In the review on the OD, Willcox et al. (12) highlight beneficial health implications of a low-calorie, nutrient-dense, antioxidant-rich dietary pattern low in glycemic load. In OD, complex carbohydrates with low glycemic index are dominant nutrients. In addition, this diet is high in fiber, fruits and vegetables rich in antioxidants, vitamins and minerals important for the cardiovascular system (potassium, magnesium). The most important sources of proteins are legumes (especially soy products) and moderate amounts of meat, mostly fish. Although the percentage of carbohydrates and fat in the traditional OD and MD are significantly different (carbohydrates-OD 85%, MD 43%; fat OD 6% MD 42%) favorable effects of both diet are similar. This indicates that the diet must be considered as a complete system. In most traditional nutritional patterns natural foods rich in complex carbohydrates with low glycemic index are used widely. In addition, natural foods do not contain hydrogenated fats, but are rich in monounsaturated (olive oil) and polyunsaturated fatty acids (fish, nuts and seeds). Scholl (13) suggests that the most effective diet in the reduction of the risk for cardiovascular diseases and prevention and treatment of metabolic syndrome are diets in accordance with MD. The author notes that the correction of dyslipidemia depends on the introduction of high-quality fats and proposes the change of the guidelines for cardiovascular prevention by increasing the percentage of fats and carbohydrate restriction. Krauss et al. (14) examined the influence of diets containing various percentage of macronutrient composition and weight loss

on atherogenic dyslipidemia. It was found that the fastest way to regulate dyslipidemia had been obtained by diets with moderate carbohydrate restriction and mild increase in high quality fats. On the other hand, after reaching a normal body weight, each of the studied diets were beneficial for cardiovascular risk reduction, indicating that the most important long-term issue is a weight loss. That could be an explanation how the macrobiotic diet and OD, which contain a higher percentage of carbohydrates and low percentage of fats are beneficial in prevention of diabetes and cardiovascular diseases, after achieving optimal body weight (6,12). In addition, the macrobiotic diet and OD contains favorable ratio between complex and simple carbohydrates and large amount of fiber from whole grains, vegetables and fruits.

In Oriental medicine it is also important to take into account energy impact of certain foods in certain organs. This relates, for example, to the positive effect of green vegetables in the energy balance of the liver and sweet vegetables (onion, carrot, parsnip, pumpkin, squash, sweet potatoes and cabbage) in the energy balance of the pancreas. Smooth energy flow in these organs is crucial in maintaining glucose and lipid metabolism. This indicates that the evaluation of diet in the prevention of chronic degenerative diseases is very complex. Special components of foods cannot be considered out of the whole nutritional system and there are at least few nutritional patterns that are beneficial.

Although the macrobiotic diet is the most similar to OD and largely to MD, the scientific community is partly skeptic. One reason is that an early theorist of macrobiotics George Osawa, proposed a restrictive diet regimens in the early last century, which were abandoned long time ago. With the development of macrobiotics, his student Michio Kushi has proposed a new macrobiotic pyramid (6). The proportional share of certain nutrients in the macrobiotic diet should not be taken literally. Macrobiotic pyramid is flexible and adapts to age, sex, health status, geographic position, climate and season. The macrobiotics provides an individual approach to everyone, as opposed to scientific recommendations that are uniform in the form of guidelines. Scientific evidences are not engaged in energetic properties of foods in the terms of Oriental medicine (15). It is therefore very important to assess Oriental diagnosis before the prescribed menu, as was done in this work, which enables more precise recommendations. On the other hand, it is necessary to monitor laboratory parameters and clinical status, and intervene in each case by changing the proportions of macronutrients, if necessary.

Maximum safety and effectiveness of macrobiotics as a therapy requires the integration of conventional medical diagnosis and therapy in many cases. Safety of

macrobiotic diet is based on the following principles which belong to the domain of conventional medicine: the respect of the recommended daily intake of nutrients for different categories, recommended energy intake expressed in kilocalories, basic knowledge of metabolism related to nutrition (e.g. herceptin importance for the metabolism of iron or vitamine D for the metabolism of calcium, etc.), knowledge of dietary restrictions in certain diseases (e.g. gluten intolerance, etc.) and monitoring of laboratory and clinical results. On the other hand, the traditional individual approach to macrobiotics is based on an assessment of energy of yin and yang, and the diagnosis in five energy transformation system, which allows far better prescription of foods in each individual case. Macrobiotic counseling is always related to the broader picture of the patient, not only for narrowly specific diseases. Whole foods carries life energy (qi), which feeds the energy system of humans. The flow of energy (qi) is also increased by movement, specific exercises, self massage and by psychological and spiritual development. Increasing flow of qi is reflected in the improvement of vitality, ease of movement, various abilities, and greater satisfaction. In this paper, improved quality of life was observed in all patients with at least 50%. Adopting a philosophy of life based on macrobiotics is the key to long-term compliance and therefore the expected effect of macrobiotics is better than other life-styles modalities without connection of body, mind and spirit.

Another important advantage of the macrobiotic approach to diet is the encouragement of organic foods, which the macrobiotic movement promotes from the start of operation. Organic foods are produced without hazardous toxic substances that act on all the systems of the human body, causing immune dysfunction, autoimmunity, asthma, allergies, cancer, cognitive deficiencies, neurological diseases, changes in reproductive organs and functions, glycemic control, etc. (16).

In this study, 16 patients (84.2%) used macrobiotics as the only therapeutic approach. Since the macrobiotic diet is basically hypocaloric, the results of overweight treatment are not surprising. However, the positive outcome of the macrobiotics in this study cannot be connected with a decrease in body weight solely, especially as the majority (52.6%) of the patients had a normal BMI at the start of implementation of macrobiotics.

The results of this study indicate that treatment of any chronic disease should be started with a healthy lifestyle based on a holistic approach, and only when necessary, patients should be subjected to pharmacological treatment. This is especially important for patients who need long-term drug use associated with adverse effects. In reality the situation is completely different. Treatment by foods and holistic approach is widely underestimated both by patients and by most physicians. In advanced stages of chronic diseases macrobiotics is usually applied as a complementary method. In these cases, macrobiotics can help to relieve symptoms, reduce therapeutic doses of drugs and increase the quality of life (6,11).

Most patients require an integrative approach, at least for diagnostics and frequently for therapeutic purposes. The growing interest for traditional medicine in patients, emerges the need to work collaboratively, with respect for the advantages and disadvantages of conventional and traditional medicine. Treatment procedures that are the most effective, safest and with least side effects, should be considered in each case.

Table 1. Evaluation of macrobiotics as a therapeutic approach - questionnaire for patients

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| <ol style="list-style-type: none"> 1. Implementation of macrobiotics: _____ years _____ months 2. Height (cm), body weight (kg). Change of BW after the implementation of macrobiotics 3. Health improvement (state the most important) 4. Problems during the implementation of macrobiotics 5. Medication therapy, state if it is abolished or reduced by medical specialist 6. Percentage of performing macrobiotic advice <ol style="list-style-type: none"> a / in the field of nutrition b / in the field of physical activity c / in the field of personal development 7. Is the quality of life changed? If so, please describe the new quality and percentage of life quality change 8. In case macrobiotic recommendations could not be undertaken in whole – state the reasons of prevention 9. Other comments |
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Table 2. Outcome of macrobiotics implementation in 19 patients

No	Patient Year of birth	Diagnosis	Relevant medical data	Outcome
1.	D.T. 1961.	Hepatitis C	Raised transaminases: ALT 53, AST 48	loss of 13 kg in 4 months, ALT 20, AST 31
2.	S.Z. 1957.	Hepatitis B	bilirubin 40,6; AST 484, ALT 606, GAMA-GT 181	loss of 11 kg in 3 months, bilirubin 13,1, AST 31, ALT 28, GAMA GT 53
3.	Z.M. 1965.	Liver steatosis	HDL 0,9; LDL 3,89; AST 42; ALT 95, GAMA-GT 96,6	loss of 19 kg in 6 months, after 3 months HDL 1,26, LDL 3,41; AST 26; ALT 47; GAMA- GT 53
4.	G.S. 1945.	Liver steatosis, hypertension	ALT 145, AST 97	loss of 10 kg in 5 months, ALT 37, AST 43
5.	A.D. 1979.	Raised total cholesterol	Probable inherited metabolic disorder	Decreased total cholesterol, pregnancy
6.	A.G. 1982	Chron disease	Resection of terminal ileum and the first part of colon	Without change in body mass; 7 months after surgery and beginning of MB , without use of other treatments , histopathological finding normal, no signs of disease
7.	M.S. 1980.	Colon irritabile		loss of 4 kg , loss of symptoms, good digestion
8.	S.G. 1951.	Colon irritabile, hypertension		loss of 12 kg in 8 months, no signs of diseases, normal blood pressure, cease in medications including antidepressives and antihypertensive medication
9.	I.S. 1978.	Colitis ulcerosa, arthritis	Salazopirin, outstanding lesions on knees and hand joints	loss of 8 kg in 3 months, significant decrease in joint pains, 10 times increased mobility, use of Salazopirin continued
10.	D.Ě. 1940.	Insuffitientio reni incipiens	Anaemia, hypertension, obesity	loss of 14 kg in 4 months, normotension and normal values in lab.tests. cease of medication
11	V.N. 1984.	Prostatitis chronica	US prostatae: slightly enlarged, presence of residual urine in bladder, chronic infection	In 3 months: expuled concrement, US finding better (no residual urine), no pain
12.	A.M. 1995.	Eccema	Previously treated by various approaches	Remission of eccema in 3 months
13.	Z.B. 1957.	Otitis media chronica cum Sunusitis	Bilateral decrease of hearing 80% 4 months during winter	In 2 months normal hearing, 6 years without recidives
14.	M.B. 1995.	Perforation of sclerotic eardrum	Two surgeries with implantation of aeral tubes	In 3 months ear drum renewed
15	S.O. 1970.	Infertility	No pregnancy before, hormonal disorder	6 months later - pregnancy
16.	D.V. 1972.	Infertility	Menstrual disorder, one child before	6 months later - pregnancy
17.	M.Z. 1982.	Hormonal disorder	Hormonal therapy prescribed for polycystic ovaries during 4 years	4 months later regular menstrual cycle, including US finding
18.	N.B. 1963.	Metrorrhagia 1 year duration	Hormonal therapy adviced, not accepted	Stop of irregular bleeding in 1 month and a few months after regular menstrual cycle
19.	R.B. 1959.	Obesity, hypertension	Body weight 200 kg, hyperlipidemia	Loss of 70 kg in 1 year, normal blood pressure and normal lipid lab findings

Legend: ALT – alanine transaminase , AST - aspartate aminotansferase, GAMA GT- gama glutamyltransferase, HDL- high density lipoprotein, LDL – low density lipoprotein, MB - macrobiotics, US - ultrasonofraphy

Table 3. Application of advices assessed by patients

Application of advices	Nutrition	Physical activity	Personal developement
To 50%		45%p	65%p
50-80%	5%p	5%p	10%p
> 90%	100% p	45%p	25%p

Table 4. Improvement of life quality assessed by patients

Improvement of life quality	Percentage
To 50%	
50%	40%p
50-80%	30%p
90%	30%p

Legend: p - patients

Apstrakt

Makrobiotika je holistički pristup zdravlju baziran na pravilnoj ishrani, aktivnom stilu života i duhovnom razvoju. Makrobiotika je, takode, metoda lečenja tradicionalne medicine. Iako je najviše popularisana kod obolelih od kancera, makrobiotika je još efikasnija u prevenciji i lečenju raznih hroničnih oboljenja. U ovom radu su prikazani rezultati uspešnog lečenja 19 pacijenata sa različitim oboljenjima (jetre i digestivnog sistema, hormonskih poremećaja kod žena, hroničnog zapaljenja uha, ekcema, početne bubrežne insuficijencije, hipertenzije i prekomerne uhranjenosti). Makrobiotika je kod 16 pacijenata bila jedina metoda lečenja, a u 3 slučaja je korišćena kao komplementarna metoda. Rezultati ovoga rada pokazuju velike potencijale makrobiotike u lečenju hroničnih oboljenja, bez neželjenih efekata i sa značajnim povećanjem kvaliteta života.

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