GEORGIAN MEDICAL NEWS

Monthly Georgia-US joint scientific journal published both in electronic and paper formats of the Agency of Medical Information of the Georgian Association of Business Press; Georgian Academy of Medical Sciences; International Academy of Sciences, Education, Industry and Arts (USA).

Published since 1994. Distributed in NIS, EU and USA.

SCIENTIFIC EDITOR
Lauri Managadze

EDITOR IN CHIEF
Nino Mikaberidze

SCIENTIFIC EDITORIAL COUNCIL
Lauri Managadze - Head of Editorial council

SCIENTIFIC EDITORIAL BOARD
Zurab Vadachkoria - Head of Editorial board
Michael Bakhmutsky (USA), Alexander Gönning (Germany), Amiran Gamrekelidze (Georgia), David Elua (USA), Konstantin Kipiani (Georgia), Giorgi Kavtaradze (Georgia), Giorgi Kamkamidze (Georgia), Paata Kurtanidze (Georgia), Vakhtang Maskhulia (Georgia), Tamara Mikaberidze (Georgia), Tengiz Riznis (USA)

CONTACT ADDRESS IN TBILISI
GMN Editorial Board
7 Asatiani Street, 5th Floor
Tbilisi, Georgia 0177

Phone: 995 (32) 254-24-91
Fax: 995 (32) 235-70-58

CONTACT ADDRESS IN NEW YORK
D. & N. COM., INC.
111 Great Neck Road
Suite # 208, Great Neck,
NY 11021, USA

Phone: (516) 487-9898
Fax: (516) 487-9889

WEBSITE
www.geomednews.org
Содержание:

Gvenetadze Z., Lagvilava G., Toradze G., Devidze I., Gvenetadze G.
TACTICS OF SURGICAL TREATMENT AT TRAUMATIC INJURIES
OF MAXILLO-ZYGOMATIC -ORBITAL COMPLEX AND THE LOWER EDGE OF THE ORBIT

Kochiashvili D., Khuskivadze A., Kochiashvili G., Koberidze G., Kvakhajelidze V.
ROLE OF THE BACTERIAL VACCINE SOLCO-UROVAC® IN TREATMENT
AND PREVENTION OF RECURRENT URINARY TRACT INFECTIONS OF BACTERIAL ORIGIN

Elgardashvili D., Kiladze M.M.
LAPAROSCOPIC SURGERY OF HIATAL HERNIA
AND GASTRO-ESOPHAGEAL REFLUX DISEASE

Исаева А.С., Вовченко М.Н.
ТЯЖЕСТЬ СИМПТОМОВ МЕНОПАУЗЫ И РИСК РАЗВИТИЯ
СЕРДЕЧНО-СОСУДИСТЫХ ЗАБОЛЕВАНИЙ

Kochueva M., Sukhonos V., Shalimova A., Psareva V., Kirichenko N.
STATE OF INTEGRAL REMODELING PARAMETERS OF TARGET ORGANS
IN PATIENTS WITH ESSENTIAL HYPERTENSION AND OBESITY

Демиденко А.В.
АКТИВНОСТЬ АПЕЛИНА У БОЛЬНЫХ ГИПЕРТОНИЧЕСКОЙ БОЛЕЗНЬЮ
С СОПУТСТВУЮЩИМ ПРЕДИАБЕТОМ И САХАРНЫМ ДИАБЕТОМ 2 ТИПА

Чанцев В.А., Леонов В.В.
ПОЛИМОРФИЗМ ГЕНА IL-8 (A-251T) У ПАЦИЕНТОВ С ОСТРЫМ ПАНКРЕАТИТОМ

Жандарова Н.А.
ОСОБЕННОСТИ ГУМОРАЛЬНОГО ИММУННОГО ОТВЕТА У ПАЦИЕНТОВ
С ХРОНИЧЕСКИМ ГЕПАТИТОМ С, СПОНТАННЫМ КЛИРЕНСОМ ВИРУСА ГЕПАТИТА С
И ЛОЖНОПОЛОЖИТЕЛЬНОЙ РЕАКЦИЕЙ АНТИ-HCV

Kravchun P., Narizhna A., Ryndina N.
MONOCYTE CHEMO ATTRACTANT PROTEIN-1 IN PATIENTS WITH CHRONIC HEART FAILURE
OF DIFFERENT FUNCTIONAL CLASS WITH TYPE 2 DIABETES

Khhkunashvili R., Tskvitinidze S., Nagervadze M., Akhvlediani L., Koridze M.
THE ASSOCIATION OF SOME GENETIC FACTORS WITH PULMONARY TUBERCULOSIS
IN GEORGIAN AND AZERI ETHNO GROUPS

Барыш А.Е., Долуда Я.А., Исаева Н.П.
АНАЛИЗ ИЗМЕНЕНИЙ БИОЭЛЕКТРИЧЕСКОЙ АКТИВНОСТИ МЫШЦ
ВЕРХНИХ КОНЕЧНОСТЕЙ У ПАЦИЕНТОВ
С ТРАВМАТИЧЕСКОЙ ДЕФОРМАЦИЕЙ ШЕЙНОГО ОТДЕЛА ПОЗВОНОЧНИКА

Вертергел А.А., Обчаренко Л.С.
ОБЕСПЕЧЕННОСТЬ ВИТАМИНОМ D ДЕТЕЙ С РЕКУРРЕНТНЫМИ БРОНХИТАМИ

Shatirishvili T., Tatishvili N., Lomidze G., Kipiani T.
ETIOLOGY AS A PREDICTOR OF MORBIDITY
AFTER CONVULSIVE STATUS EPILEPTICUS IN CHILDREN

Shatirishvili T., Tatishvili N., Lomidze G., Kipiani T.
EFFECT OF TREATMENT OF CONVULSIVE STATUS EPILEPTICUS
ON OUTCOME IN CHILDREN

© GMN
Ustiaishvili M., Mamaladze M., Sanodze L., Labuchidze G.
ISOLATION OF DENTIN TISSUE BY USING A NEW LINER BIODENTINE
AT MANAGEMENT OF SIMULATED EXPERIMENTAL CARIES........................................................................67

Джапаридзе Н.А., Чакветадзе Л.Б., Джикия И.Д.
МОРОФОЛОГИЧЕСКИЕ ОСОБЕННОСТИ РАКА ТЕЛА МАТКИ........................................................................72

Николаишвили М.И., Иорданишвили Г.С., Чичинаязе К.Н., Джикия Г.М., Зеноишвили С.И.
ВЛИЯНИЕ РАДИАЦИИ НА ВЫЖИВАЕМОСТЬ, ПОВЕДЕНИЕ
И НЕЙРОХИМИЧЕСКИЕ КОРРЕЛЯТЫ КРЫС........................................77

Tskhvediani A., Khukhunashvili T., Eliashvili T., Tsertsvadze G., Gachechiladze N., Tediaishvili M.
THE POSSIBLE USE OF V. PARAHAEOMOLYTICUS – SPECIFIC BACTERIOPHAGES
FOR PREVENTION AND THERAPY OF INFECTIONS CAUSED BY V. PARAHAEAOMOLYTICUS .............82

Сичинани М.Б., Мchedlidze К.З., Чурадзе М.В., Алавия М.Д.,Анели Дж.Н.
ХИМИЧЕСКИЙ СОСТАВ И МИКРОСТРУКТУРНЫЕ ОСОБЕННОСТИ НАДЗЕМНЫХ
И ПОДЗЕМНЫХ ВЕГЕТАТИВНЫХ ОРГАНОВ СТАЛЬНИКА ПОЛЕВОГО – ONONIS ARVENSIS L.
ПРОИЗРАСТАЮЩЕГО В ГРУЗИИ.........................................................88

Sulaberdize G., Okujava M., Liluashvili K., Tughushi M., Bezarashvili S.
DIETARY FIBER’S BENEFIT FOR GALLSTONE DISEASE PREVENTION
DURING RAPID WEIGHT LOSS IN OBESE PATIENTS.................................................................95
Dietary fiber is considered as a key component in healthy diet. Different definitions of dietary fiber are available, but according to all existing definitions they are considered as a group of carbohydrate polymers and oligomers that escape digestion in the small intestine and pass into the large bowel, where they are partially or completely fermented by the colonic microflora [8]. The interest to this nutrient particularly arise in early 1970s, after the dietary fiber hypothesis was launched. British physician Denis Burkitt linked development of Western diseases with low intake of dietary fiber [13]. Conducted studies showed obvious linkage between reduction in the occurrence of conditions like constipation, diverticular disease, hiatal hernia, appendicitis, varicose veins, hemorrhoids, gallstones, obesity, cancer of the large bowel, coronary heart disease and diabetes with the addition of dietary fiber to the diet [8,13]. Recommendations of dietary fiber intake in Europe range from 25 g/day to over 40 g/day based on the AOAC International Official Method 985.29 [10], which is two or three folds higher of average fiber intake among the population of Western countries.

Generous intake of dietary fiber enhances quality of life and improves physical and psychological health [14]. Wheat bran is most concentrated source of insoluble fiber in the European diet. It contains 43g fiber/100g, while rice bran contains 21g fiber/100g and oat bran - just 15g fiber/100g [11].

Gallbladder disease is one of the most common conditions among gastrointestinal disorders and is manifested by the presence of gallstones, detected with an ultrasound investigation [9]. Rapid weight loss using very low calorie diet (defined as <800 kcal per day) markedly increases the risk of gallstone formation [7]. During protein rich very low calorie diet gallstone formation is facilitated by the more concentrated bile and its reduced flow during this type of diet. Preventive action of food, rich with dietary fiber, against gallstones is well evidenced [5,11]. At the same time diets that are high in fiber are typically low in fat and energy intake, both of which are helpful for reduction of body weight [15].

We developed dietary fiber rich low-calorie food products (bread, muesli, combination with minced meat) under the trade name “Margi” [1-3]. Advantage of consumption of these products for prevention of formation of the gallbladder stones was evidenced during investigation among patients with viral hepatitis B [4].

The aim of present study was to compare the effects of very low calorie diets - protein rich and dietary fiber rich food based - on gallstones formation during rapid weight loss.

Materials and methods. Patients were recruited from outpatients of the Department of Internal Medicine. The study involved 68 patients aged from 25 to 55 years, including 50 women (73.5%) and 18 men (26.5%). The main inclusion criteria were obesity and absence of gallstones in the gallbladder. The body weight index in all cases exceeded normal value (25 kg/m²) and equaled to 35±4.7 kg/m². Before involvement in the trial ultrasound investigation of the gallbladder was provided. The amount of biliary sludge in the patient’s gallbladder lumen mostly did not exceed 1/5–1/4. Only in 5 cases, gallbladder lumen ultrasonography detected the biliary sludge in excess of 1/4. Two weeks prior to the commencement of the trial these patients underwent sanation of the biliary tract, with a complete evacuation of the contents.

12 (17.6%) patients had past medical history significant for acute viral hepatitis. Most of them failed to indicate which hepatitis (A, B, C) they had suffered. Out of the total number of patients, 14 (20.6%) patients were found to have IgG anti-HBe (IgG antibody subclass to hepatitis B core antigen) in the blood serum. None of them were found to have HbsAg (surface antigen to the hepatitis B) and antibodies. Hepatomegaly was observable in 5 cases (7.4%). No disturbances of liver function tests were detected.

According to past history, 5 patients had stomach and duodenum disorders: four patients had gastritis, one – peptic ulcer. Endoscopy was carried out in all five cases and confirmed the past history data, but all cases demonstrated remission, both clinically and with endoscopy.

None of the patients suffered with intestinal diseases being clinically manifested with prolonged diarrhea. Prior to the trial 25 patients (36.8%) complained on constipation. None of the patients under observation had chronic diseases requiring chemotherapy or keeping of the diet for the reasons other than reduction of weight.

All patients were divided into two groups, each composed of 34 patients. For weight correction purposes the patients in first group were kept during 5 weeks on a 520-800 kcal diet of “Margi” food products: bread, muesli, dishes prepared from minced meat. The food products under trade name “Margi” contain wheat bran, processed under the
Changes in the gall-bladder wall and content were assessed by sonography and body weight, as well as body mass index were measured before starting the diet, after three weeks from the commencement of the diet and upon its completion.

**Results and discussion.** Before starting the diet body weight of the patients in first group was 108,2±16,2 kg, while that in the second group - 110,5±18,8 kg. Three weeks after the commencement of the diet, the body weight reduced by 7,5±1,6 kg and 7,8±1,2 kg accordingly in first and second groups. The measurement of the body weight after completion of the diet revealed decrease by another 3,8±1,2 kg in the first group and by 4,1±0,7 kg in the second group. The total weight reduction during five weeks in the group consuming dietary fiber rich food was on average 10,9±1,8 kg, which does not significantly differ from the weight reduction in the patients getting protein rich diet.

An increase in the amount of biliary sludge was reliably higher in the second group of patients (26.5%), as compared with the patients being kept on the dietary fiber-rich, low-calorie food (8.8%) (Table 1). Sonography conducted after three weeks revealed a growth in the amount of biliary sludge in 3 cases (8.8%) in the first group and in 7 cases (20.6%) in the second group. The patients with increased amount of biliary sludge were excluded from the investigation. Following upon the diet’s completion, two more patients (5.9%) in the second group were found to increase the biliary sludge amount.

This study has demonstrated that dietary intervention based on fiber rich food didn’t lead to worsening of digestive health and even conferred significant improvements in constipation, bloating and digestive discomfort. On the other hand, by the end of the trial, complaints for digestive feelings were observed in 7 (20.6%) patients of the second group.

Weight loss is often one of the first recommendations made to obese patients for prevention of cardiovascular diseases (CVD) and diabetes mellitus (DM). However, rapid reduction of weight often is related with gallstones formation and deterioration of digestive health. Our results indicate successful and nearly equal reduction of body weight by means of dietary fiber rich products under trade mark “Margi” and protein rich diet, but high fiber consumption showed statistically significant benefits for prevention of gallstones formation and improvement of digestive health at all. According to existing scientific data dietary soluble and insoluble fiber inhibits cholesterol stone formation by reducing the biliary cholesterol saturation index [9]. The beneficial effect of fiber on digestive health and constipation is well evidenced. Fiber effect on laxation and regularity is related primarily to the ability of fiber to increase stool weight. The increased stool weight is due to the physical presence of the fiber, water held by the fiber, and increased bacterial mass from fermentation. Larger and softer stools increase the ease of defeation and reduce transit time through the intestinal tract, which may help to prevent or relieve constipation, the frequent concomitant state of obesity [10]. Reduction of hunger and greater satiation are also significant advantages of dietary fiber rich food for successful management of obesity.

**Conclusion.** The study showed that, in the respect to weight loss, diets based on fiber rich and protein rich food are equal, but fiber rich diet has considerable privilege in prevention of gallstone disease. Our findings support the presence of known association between increased dietary fiber consumption and reduction of gallstone formation [3,4,9]. Obesity and rapid weight loss are risk factors for development of gallstones. Tak-
ing in an account the beneficial effect of dietary fiber, the food rich with this nutrient, particularly low-calorie fiber rich food “Margi”, can be recommended for rapid weight loss in obese patients.

REFERENCES


SUMMARY

DIETARY FIBER’S BENEFIT FOR GALLSTONE DISEASE PREVENTION DURING RAPID WEIGHT LOSS IN OBESE PATIENTS

Sulaberidze G., Okujava M., Liluashvili K., Tughushi M., Bezbarashvili S.

Tbilisi State Medical University, Department of Internal Medicine, Department of Medical Pharmacology and Pharmacotherapy, Georgia

The aim of present study was to compare the effects of very low calorie diets – protein rich and dietary fiber rich food based – on gallstones formation during rapid weight loss.

68 patients were involved into the study. The body weight index in all cases exceeding normal value and equaled to 35±4,7 kg/m². For weight correction purposes during 5 weeks the patients in first group were kept on a 520-800 kcal diet of “Margi” food products, prepared according our technology, and in the second group on a protein rich diet of the same calorie content. The body weight and changes in the gall-bladder wall and content were assessed by sonography before starting the diet, after three weeks from the commencement of the diet and upon its completion.

The measurement of the body weight after completion of the 5 week diet revealed decrease by 10.9±1,5kg in the first group and by 11,2±1,1kg in the second group. Sonography disclosed growth in the amount of biliary sludge in 3 cases in the first group and in 9 cases in the second group. The statistical analyses of results indicate successful and nearly equal reduction of body weight by means of dietary fiber rich and protein rich diet, but high fiber consumption showed statistically significant benefits for prevention of biliary slag accumulation.

The study showed that, in the respect to weight loss, diets based on fiber rich and protein rich food are equal, but fiber rich diet has considerable privilege in prevention of gallstone disease. Our findings support the presence of known association between increased dietary fiber consumption and reduction of gallstone formation. Obesity and rapid weight loss are risk factors for development of gallstones. Taking in account the beneficial effect of dietary fiber, the food rich with this nutrient, particularly low-calorie fiber rich food “Margi”, can be recommended for rapid weight loss in obese patients.

Keywords: fiber rich food, protein rich food, gallstone disease, weight loss.
РЕЗЮМЕ

ЗНАЧЕНИЕ РАСТИТЕЛЬНЫХ ВОЛОКН ДЛЯ ПРЕВЕНЦИИ ЖЕЛЧНОКАМЕННОЙ БОЛЕЗНИ ПРИ БЫСТРОМ СНИЖЕНИИ ВЕСА У БОЛЬНЫХ С ОЖИРЕНИЕМ

Сулаберидзе Г.Т., Окуджава М.В., Лилиашвили К.Н., Тугушви М.Г., Безарашвили С.И.
Тбилисский государственный медицинский университет, департамент внутренних болезней, департамент медицинской фармакологии и фармакотерапии, Грузия

Целью исследования явилась сравнительная оценка двух диет низкой калорийности: диета, содержащая продукты фермы «Маргит», и диеты, богатой белками, с точки зрения их влияния на снижение веса и образование желчных камней.

Под наблюдением находились 68 пациентов. Индекс массы тела исследуемых пациентов составлял 35±4,77кг/м². Пациенты, с целью коррекции веса, на протяжении пяти недель находились на диете 520-800 ккал. Пациенты первой группы (n=34) принимали богатые растительными волокнами продукты фермы «Маргит» по оригинальной технологии разработанной сотрудницами Тбилисского государственного медицинского университета (патент № 93314, "Сакатон" 25/01-2012). Пациенты второй группы (n=34) находились на богатой белками диете. До начала диеты, три недели спустя и по окончании диет пациентов взвешивали и проводили ультразвуковое исследование желчного пузыря.

После 5-недельной диеты снижение веса пациентов первой группы составило 10,9±1,5 кг, второй группы - 11,2±1,1 кг. При ультразвуковом исследовании увеличение осадка в желчном пузыре отмечалось у трёх больных первой и у девяти второй групп. Статистический анализ данных показал, что различие в снижении веса при применении богатых растительными волокнами пищи и диеты богатой белками незначительно, однако риск образования желчных камней статистически значимо выше при применении диеты богатой белками.

На основании полученных данных следует заключить, что обе диеты по эффективности снижения веса имеют одинаковые показатели, однако риск образования камней в желчном пузыре более высокий в случае белковой диеты. Ожирение и быстрое снижение веса являются риск-факторами желчнокаменной болезни. Исходя из вышеперечисленного, авторы рекомендуют пищу, богатую растительными волокнами, в частности, продукты «Маргит» для быстрого снижения веса.
3 ჰუმანოგენტიკურ პაციენტის გვერდიდან - 9 ჰუმანო-
გენტიკურ პაციენტის გვერდიდან საბითური გენეტიკური ინფორმაცია შეიცავდა, რომ, შესაბამის კლების თავისუფლებით საქართველოში მიუხედავად ის, რომ შესაბამის კლების თავისუფლებით საინფორმაციო გენეტიკურ ინფორმაცია შეიცავდა საბითურს.

მოცემული შედეგები თარგმნით, რომ შემდგომი თავისებური მართვისთვის ცალკეული მოვლინი გვერდიდან გვერდიდან შეიტანია ან რეჟიმის დეტალები და განათლება განვითარება ჯარიდან შესაძლო პაციენტის ფარგლებში სტუდენტებისთვის საწყისად. იყო შესაძლო ამ გვერდიდან გვერდიდან საინფორმაციო გენეტიკურ ინფორმაციის შეცვლა და განვითარება ჯარიდან. შეიძლება შეეძლო გენეტიკური ინფორმაციის შეცვლა და განვითარება ჯარიდან.

***

© GMN