

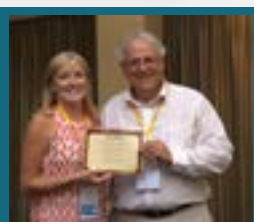
Hybrid Event

29th International Conference on

Clinical Nutrition

February 13-14, 2023

London, UK



Posters

Assessment of iron status among infants aged six to nine months at soy division Keiyo South Sub County

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The increased prevalence of iron deficiency among infants aged 6 and 24 months can be attributed to the consumption of an iron deficient diet or a diet that interferes with iron absorption at the critical time of infancy. The objectives of the study were to determine iron status among infants, to determine dietary intake of complementary foods by the infants and to ascertain the complementary feeding in Keiyo South Sub County. The cross-sectional study design was adopted. The study was conducted at Soy division in Keiyo South Sub County at Biretwo, Cheptebo and Segoo health facilities. Systematic sampling procedure was used to select 136 subjects. In the second year, 54 mothers were followed up due to loss of subjects. The 24 -hour recall generated data on dietary iron intake. Biochemical tests were carried out by use of the portable Hemo_Control Photochrometer [Figure 1] device at the health facilities. Data was analyzed using SPSS computer software version 17, 2009.

Results showed that 28.7% of the infants had mild anemia whereas 23.5% had moderate anemia. The mean iron intake was 10.59 ± 1.71 mg/day. Most (94.1%) of the mothers were still breastfeeding but on the contrary, 45.6 % of all the mothers fed their infants on tea which is an iron inhibitor. None of the infants had received iron supplements. Policies for screening infants for iron deficiency during the first year of life should be developed as the iron deficiency anemia is a problem in Kenya.



Figure 1. Hemo_Control Photochrometer @ Biretwo Health Center.

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Biography

Faith is currently undertaking her postdoc at Nottingham, UK. She holds a PhD in Environmental Health (Food Toxicology and Nutrition), Master of Science in Community Nutrition and Bachelor of Science in Environmental Health. She has practiced as a public health officer in the Ministry of Health and is a lecturer and Head of Department Public health at the school of Health science, University of Kabianga, Kenya. Her research interests focus on iron and other micronutrients, considering their interactions with toxins and toxicants and how this may impact upon maternal and child health and have vastly published. She has further been a health consultant in various organizations including the Africa Medical Research Foundation (AMREF). She does community service in maternal and child health and nutrition and hopes that she will further translate her current research findings into policies. She networks widely in institutions, individuals from different disciplines, backgrounds and nationality.

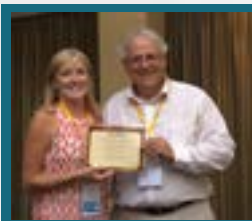
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Accepted Abstracts

A new model of clinical care and physician training should prioritize patient nutritional status and micronutrient remediation

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Statement of the problem: Extensive clinical experience at a US Federally qualified health center serving vulnerable populations reveals a need for social accountability in treating patients where they are: those who have poor nutrition, smoke, abuse substances and alcohol, are sedentary and/or take many common medications, are at high risk for nutrient deficiencies. These are neither routinely assessed nor related.

Methodology & theoretical orientation: Longitudinal systematic documentation of clinical assessment and care.

Findings: The speaker maintains a nutritional deficiency database to document and disseminate her case-based knowledge. One example: in 2019-2020, among 1600 patients, 326 had nutritional deficiency along with comorbid condition(s): 96 patients had levels of Vitamin C below normal range; Vitamin B6 (66); Vitamin D (109); Vitamin A (32).

Significance: These deficiencies, if untreated, lead to serious and easily preventable health problems standard care often fails to identify and address. Data and brief case examples will reveal the need for new clinical rubrics to: query patient nutrition in initial clinical encounters; conduct micronutrient testing and supplementation; consistently document to establish if micronutrient supplementation resolves part or all of the presenting problem(s) or achieves other health aims. The speaker is developing needed curricula to train providers in: macro and micro nutrition and gut health, for prevention and overall health; routine assessment of diet; testing for micronutrient status; patient nutrition education and providing multiple resources to help patients eat well. Physicians should take their own often time-challenged nutritional habits seriously, for their own health and to credibly model patient behavior change.

Conclusion: There is a clear need to document improved outcomes and cost efficiency of routine patient nutritional assessment, education and follow-up, vs. ordering many diagnostic tests that may not improve patients' status. A new model of care should include routine, mandated nutritional status evaluation and remediation.

Association of fructose consumption with manifestations of Functional Gastrointestinal Disorders (FGIDs): The Hellenic National Nutrition and Health Survey (HNNHS)

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Background: The study aimed to assess the prevalence of Functional Gastrointestinal Disorders (FGIDs) and Irritable Bowel Syndrome (IBS) among adults and to determine their association with fructose consumption.

Methods: Data from the Hellenic National Nutrition and Health Survey (HNNHS) were included (3798 adults; 58.9% females). Information regarding FGID symptomatology was assessed using validated questionnaires and ROME III association criteria, in a sample of the population. Fructose intake was estimated using 24 hour recalls and MedDiet score to assess adherence to the Mediterranean diet. Multiple logistic regression analysis by tertile of fructose consumption was used to examine associations. Predicted probabilities of IBS were derived and post hoc analysis for MedDiet score and added sugar intake were performed, by area.

Results: The prevalence of FGID symptomatology was 20.2% and 8.2% had IBS specifically (representing 40.2% of total FGID). The odds of FGID significantly increased by 28% (95% CI:1.03-1.6) and IBS by 49% (95% CI:1.08-2.05) in individuals with higher fructose intake (3rd tertile compared to 1st). When area of residence was accounted for, individuals residing in the Greek islands had a significantly lower probability of FGID and IBS compared to those residing in Mainland and the main Metropolitan areas. Islanders were also found to have a higher MedDiet score and lower added sugar intake, compared to the main metropolitan area.

Conclusion: FGID and IBS symptomatology was most prominent among individuals with higher fructose consumption, although this was most prominent in areas with a lower Mediterranean diet adherence, suggesting that fructose dietary source and not total fructose may be contributing to FGID.

Keywords: Gastrointestinal disorders, IBS, ROME III, Fructose consumption, Mediterranean diet.

Micronutrient deficiency and burden of anaemia: A study among tribal population of Rajasthan, India

Rupalika

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Objective: To assess the role of micronutrient (i.e., folate and vitamin B₁₂) deficiency in the causation of anaemia in tribal population of Rajasthan.

Design: Cross-sectional study. Complete Blood Count was done by using Sysmex-KX 21. Homocysteine, vitamin B₁₂ and folate levels were measured by chemiluminescence by using Immulite-1000. Anaemia status was categorised on the basis of Haemoglobin (Hb) and Mean Corpuscular Volume (MCV) level.

Setting: The present study was conducted among the Bhil tribe settled in Rajasthan as well as in Delhi.

Subjects: Subjects comprised apparently healthy adult individuals of either sex from the age group ≥ 25 to ≤ 65 years.

Results: Prevalence of anaemia, vitamin B₁₂ deficiency and folate deficiency was found to be 65%, 61.75% and 35% respectively in the studied population group. Mild anaemia (34%) was found to be higher as compare to the moderate (24.5%) and severe anemia (5%). Individuals with macrocytic, microcytic and normocytic anaemia showed high prevalence of micronutrient deficiency i.e., vitamin B₁₂.

Conclusion: High prevalence of hyperhomocysteinemia along with the micronutrient deficiency of vitamin B₁₂ and folate among anaemic individuals indicates towards the co-existence of iron and vitamin B₁₂ deficiency in the studied population. The results of the present study hint towards an immediate attention towards the need for awareness regarding dietary sources of micronutrients along with their supplementation among vegetarian populations.

Clinical implication of gluten free cupcakes on anthropometric indices and gastrointestinal symptoms in celiac patients

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Fundamental adherence to conventional gluten free diet can improve gastrointestinal symptoms secondary to celiac disease but also increases the chances of various nutritional deficiencies. The substitution of wheat should be done in such a way that it would not only fulfill the gluten free criteria but it should also provide nutrient density. Therefore, the present study was conducted to assess the efficacy of novel gluten free cupcakes (enriched with chickpea, almonds, flaxseed and sorghum) against gastrointestinal symptoms. Efficacy trial (No.029/IRC/BMR) of gluten free cupcakes for 12 weeks was carried out in children between the age of 3-8 years recruited from nutrition clinic and divided into two groups i.e. control group and treatment group with 35 participants in each group. The treatment group was provided with gluten free flour blend (chickpea, sorghum, almonds and flaxseed) cupcakes on the other hand control group was provided with rice made cupcakes (conventional gluten free recipe). The weight of the cupcakes per unit was 35 g and 2 cupcakes were recommended for consumption on daily basis. The study parameters including anthropometric measurements, caloric intake and gastrointestinal complaints were assessed. ANOVA was applied to assess the difference in parameters. Weight was significantly increased after the 12 weeks trial in both control (13.7 ± 4.8 to 14.5 ± 4.4) and treatment (13.6 ± 4.6 to 15.4 ± 4.6) groups. Mid Upper Arm Circumference (MUAC) was significantly increased in treatment group only (15.3 ± 3 to 15.5 ± 3). Abdominal pain was reduced upto 38.7% from 6.5% (absent) in control group compared to treatment group in which it was reduced from 15.2% to 33.3% (absent). Severe abdominal pain was reduced from 22.6% to 9.7% and in treatment group it was reduced from 24.2% to 18.2% only. Heart burn was reduced up to 29% from 19.4% in control group and in treatment group it was reduced up to 45.5% from 30.3%. Regurgitation was reduced up to 35.5% from 29% in control group and in treatment group it was reduced up to 60.6% from 39.4%. Nausea decreased up to 57.6% from 63.6% but the relation was opposite in case of control group. Diarrhea was reduced up to 33.3% from 27.3% in treatment group. But the cases of moderate to severe diarrhea increased in control group. Formulated gluten free cupcakes are found to be effective in improving anthropometry and gastrointestinal symptoms in study population.

Keywords: Gluten free, Cupcakes, Children, Anthropometry, GI symptoms.

Food pattern & hyperlipidemia assessment of diabetic patients of Taleqani General Hospital, Shahid Beheshti University of Medical Sciences, Tehran, Iran

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Introduction: Human studies investigating have achieved the relationship between food patterns and diabetes. This survey was carried out to investigate food patterns and its probable relationship with Hyperlipidemia Body Mass Index in bedridden diabetic patients of Taleqani General Hospital, 2005.

Methods: Sixty-five diabetic patients of Endocrinology ward with the age of 16 to 80 years were chosen by random sampling from the hospital. Demographic data covering Height, weight measurements collected for each patient and BMI was calculated by $W \text{ (kg)}/H^2 \text{ (m}^2\text{)}$ for each individual. Dietary Patterns covering 24-hour dietary recall for 3 days and also food frequency questionnaire were filled for each patient. Statistical analysis was carried out using SPSS.

Results: The mean diabetes duration was 7.97 years. 57% of diabetic patients had positive familial history. The mean BMI of the patients was 26.02 kg/m^2 . 29.23% of the patients (19 individuals) had Hyperlipidemia. The dietary pattern showed that (31 individuals) 47.62%, (2 individuals) 3.07%, (28 individuals) 43.07%, (3 individuals) 4.61% and (1 individual) 1.53% consumed saturated (vegetable) fat, saturated (animal) fat, unsaturated vegetable oil, olive oil and butter, respectively. And also, the results showed that obese patients were more susceptible to both hypercholesterolemia and hypertriglyceridemia than patients with normal BMI.

Conclusion: In conclusion, we found that most of diabetic patients had poor eating habit and unsuitable consumption pattern in oil choices which has a positive relation with hyperlipidemia. It is highly recommended to provide diabetic patients with correct information about healthy eating, as high-risk population of the community.

Role of nutraceutical in management of dyslipidemia: A meta-analysis of 250 RCTs

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Statement of the problem: Dyslipidemia is one of the major risk factors for Non-Communicable Diseases (NCD). Its worldwide prevalence depicts that 40% female and 37% male population have raised cholesterol mainly associated with NCDs like cardiovascular diseases, hypertension, diabetes, fatty liver, Inflammatory Bowel Syndrome (IBS), obesity, hypothyroidism, cancers, osteoarthritis, stroke, cerebrovascular disease, causing mortality of 10 million people per year. Globally 30-40% patients are statin intolerant to pharmacological intervention owing to its side effects like kidney & liver failure, muscle weakness, diarrhea, memory loss and cataracts. The causative factors include unhealthy foods & lifestyle, obesity, smoking, alcoholism, physical inactivity and diabetes.

Objectives:

1. To explore the most effective nutraceutical improving individual quantities of lipid profile.
2. To identify the highly significant nutraceuticals for the management of dyslipidemia.

Methodology & theoretical orientation: Research design is review based meta-analysis involving 250 RCT studies, with 21,450 subjects, sampled through Prisma flow and PICO (Population, Intervention, Comparison, Outcome) being research instrument. Data collection & inclusion criteria were availability of complete article, human subjects, dosage, regime/day, treatment duration and fasting lipid profile (TC, LDL, TG and HDL cholesterol) before and after treatment. Paired sample t-test and one-way ANOVA with 95% CI were used for inferential status.

Findings: The result demonstrated amongst 25 nutraceuticals, the most effective for improving individual quantities of lipid profile are Bergamot for TC reduction ($p=0.003$), Polyphenol reduced LDL ($P=0.01$), Spirulina reduced TG ($p=0.004$) & Niacin increased HDL ($p=0.02$). The highly significant nutraceuticals to treat overall dyslipidemia are:

1. Niacin which reduced bad cholesterol ($p=0.001$) & increased HDL-C ($p=0.02$).
2. Dietary fiber reduced bad cholesterol ($p=0.001$) and increased HDL-C ($p=0.005$).
3. Berberine reduced bad cholesterol ($p=0.007$) and increased HDL-C ($p=0.05$).

Conclusion: Nutraceuticals work best without side effects but with other good effects of on health, accompanied with healthy diet, DASH diet for hospitalized CKD, diabetic, CVD and other NCDs as well as in Statin intolerant. Bergamot, Polyphenol, Spirulina and Niacin significantly improved TC, TG, LDL and HDL-C, respectively. Niacin, Dietary fiber and Berberine are highly significant to manage dyslipidemia.