A study to assess the nutritional status of under five children with pica in selected villages, Nellore

M. Radhika

Department: and institution: Pediatric nursing, Narayana College of Nursing, Chinthareddypalem, Nellore

ICRMSW 2013

Corresponding Author

Prof ,Mrs. M. Radhika

Email:**radhika.grm@gmail.com.**

Mobile no- 08886568507.

Abstract

Introduction and Rationale

Under five age children are vulnerable and special risk group constituting a major portion of total population. Adequate nutrition is vital for growth and development of children. Almost all nutritional disorders like protein energy malnutrition, anemia, and behavioral nutritional problems occur in this age group. Pica is one of the common behaviorproblem in children. The objective of this study was to assess the nutritional status of children with pica behavior.

Objectives

To identify the under five children with pica behavior.

To assess the nutritional status of underfivechildren with pica.

To find association between the nutritional status of underfivechildren with the selected socio -demographic variables.

Materials and methods: Non experimental - descriptive cross sectional study was conducted in two Villages – Venkatachalam and BujjaBujja Nellore .Questionnaire and baiting method was used to identify children with pica behavior .60 children(2-5 yrs of age) with pica were selected by simple random technique by means of lottery method. Nutritional status was assessed by anthropometric measures and physical examination.

Results: The study shows that among 60 children 24 (40%) were boys and 36 (60%) were girls and 18 (20%) children had occasional Pica, 48 (80%) had frequent pica. With regard to wt, among boys, 8(33.3%) had grade –III , 7(29.3%) had grade –II, and 7(29.3%) had grade –I malnutrition. Among girls, 15 (38.9%) had grade –I , 10(33.3%) had grade –II, and 7(22.2%) had grade–III malnutrition. With regard to MAC(Mid Arm Circumference),among boys,8(33.3%) had mild , 7(29.3%) had moderate and 7 (29.3%) had severe malnutrition .Among girls, 15 (41.7%) had mild,10(27.8%) had moderate and 7 (19.4%) had severe malnutrition.

Conclusions: Pica behavior significantly affect the nutritional status of the children

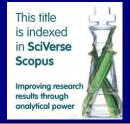**Keywords: Under Five Children, Pica, Nutritional Status.**

Assessment of Knowledge and Practice of Diet Rich in Iron among Antenatal Mothers with Anaemia

TarsisHenita HJ

Department and Institution: Department of Obstetrics and Gynaecological Nursing, CSI College of Nursing, Dr. SMCSI   Medical College, Karakonam, Thiruvananthapuram

---

ICRMSW 2013

Corresponding Author

TarsisHenita HJ

Email: henitat@yahoo.co.in

Cell no. 09442304899

Abstract

Introduction and Rationale

A basic knowledge of nutritional requirements in pregnancy is essential. During pregnancy, women are prone for nutritional deficiencies like anaemia.

Iron deficiency anaemia mainly occurs due to inadequate intake of foods rich in iron and also due to faulty dietary practices. This is due to lack of knowledge about sources of iron and mode of intake.

Objectives:

Assess knowledge and practice of diet rich in iron among antenatal mothers with anaemia.

Determine correlation between knowledge and practice of diet rich in iron

Determine association of level of knowledge and practice of diet rich in iron among antenatal mothers with anaemia with demographic variables

Formulate a self- instructional module associated with iron rich diet.

Materials and Methods:

Hundred antenatal mothers with anaemia were selected conveniently, knowledge and practice regarding diet rich in iron was assessed using structured interview schedule and self-instructional module was distributed. Whole study was done by descriptive research design.

Results :

Majority (64%) had inadequate knowledge, 26% had moderately adequate knowledge and 10% had adequate knowledge. Practice of diet rich in iron was poor in majority (71%), satisfactory in 26% and good in 3%. Positive correlation (r=0.96) exist between knowledge and practice. Association was found between educational status, occupation, monthly family income, age at marriage, age at first pregnancy, number of pregnancies, percentage of haemoglobin and level of knowledge (P<0.05). Association was found between religion, educational status, monthly family income, age at marriage, age at first pregnancy, percentage of haemoglobin and level of practice (P<0.05). Recommended that a process of faculty evaluation through feedback is incorporated in order to improve teaching and learning practices.

Conclusion:
Inadequate knowledge and poor practice of diet rich in iron can lead to Iron deficiency anaemia in pregnancy

Keywords: Anaemia, Antenatal mothers, Diet rich in iron, Knowledge, Practice.

Effectiveness of Pamphlet on cholesterol and its role in heart disease among adults of selected urban area at Mangalore

Vinutha D'souza[1], Effi Elizabeth Philip[2], Vivek R B[3]

Department and Institution: Department of Community Health Nursing, Laxmi Memorial College of Nursing, A J towers, Balmatta ,Mangalore , Karnataka 575002

ICRMSW 2013

Corresponding Author
Vinutha D'Souza, Associate Professor
Email: vinurony@gmail.com
Cell no. 9916823229

Abstract

Introduction and Rationale

Blood cholesterol has a lot to do with the chance of getting heart disease. Excessive body fat is associated with increased risk for heart disease. High cholesterol level will result in the hardening of arteries which leads to heart attack. So as a primary prevention it is very important to teach the community people regarding cholesterol and itsrole in heart disease and its prevention.

Objectives:

To determine the knowledge of adults regarding cholesterol and its role in heart disease.
To evaluate the effectiveness of pamphlet regarding cholesterol and its role in heart disease.
To find the association of pre–test knowledge score with selected demographic variables.

Materials and Methods:

An evaluative research approach with a pre – experimental design was used for the study. Purposive sampling technique was used to select 30 adults. On the first day pre test was conducted to assess the knowledge of adults regarding cholesterol and its role in heart disease using structured knowledge questionnaire and pamphlet was distributed on the same day. Post test was conducted on the seventh day.

Results :

The results of the study showed that the mean post test knowledge score (18.2) was higher than the mean pre test knowledge score (12).Computed' value (t $_{29}$ = 2.15 p<0.05) showed significant difference between the pre-test and post-test knowledge. Association between pre test knowledge score and presence of heart disease in family (χ^2= 3.95), was statistically significant at 0.05 level.Conclusion: Inadequate knowledge and poor practice of diet rich in iron can lead to Iron deficiency anaemia in pregnancy

Conclusion: Findings of the study indicate that pamphlet was effective in improving the knowledge of adults' regarding cholesterol and its role in heart disease. The community should be screened for heart disease so that the disease can be identified at the earliest and complications can be prevented.
Keywords: Effectiveness, cholesterol. Pamphlet.

Nutrition and Health - Cardiovascular diseaseProtective role of ascorbic acid (Vitamin C) in arsenic induced cardiotoxicity

Vineetha R. C., Abhilash S., R.Harikumaran Nair

Department and Institution: School of Biosciences, Mahatma Gandhi University, Kottayam-686560, Kerala, India.

ICRMSW 2013

Corresponding Author

Dr. R Harikumaran Nair

Email: harinair@mgu.ac.in

Cell no. 9447260362

Abstract

Introduction and Rationale

Ascorbic acid (Vitamin C) is an essential vitamin found in fruits and vegetables. It is a low molecular weight, water-soluble antioxidant. Evidences showed that nutritional supplementation of antioxidants can reduce the risk of degenerative diseases such as cardiovascular disease, cancer and neurological diseases. Post market research in pharmaceutical sciences observed that many of the modern chemotherapeutic compounds have side effects. For example, Arsenic trioxide (As$_2$O$_3$), a first line chemotherapeutic against leukemia is well known for its cardiac side effects which include QT interval prolongation, torsades de pointes and sudden death. We hypothesized that combination of drug and protective molecules can be used for reducing the side effect of chemotherapeutics. So the present study aims to evaluate the efficacy of vitamin C as a nutritional supplement in combination treatment to reduce the risk of cardiac side effects that occur due to chemotherapy

Objective

To evaluate the Vitamin C combination treatment strategy for reducing the cardiac side effects of chemotherapeutic compound.

Materials and Methods:

Cell line: H9c2 cardiomyocytes acquired from National Centre for Cell Sciences (NCCS), Pune.

Chemicals and Reagents: Vitamin C, Arsenic trioxide (As$_2$O$_3$),Acridine Orange and Ethidium Bromide [Sigma], Fetal Bovine Serum (FBS) [Invitrogen], 3-(4, 5-dimethylthiazol-2-yl)-2, 5, diphenyltetrazolium bromide (MTT), dimethyl sulfoxide (DMSO), Dulbecco's modified Eagle's medium (DMEM), Trypsin - EDTA solution and other chemicals [Himedia]. Cells were subjected to Morphological analysis, *in vitro* cell viability assay, lactate dehydrogenase leakage assay, Lipid peroxidation assay and Acridine Orange/ Ethidium Bromide fluorescent double staining.

Results

Results from the cell viability assay showed that combination of Vitamin C with As$_2$O$_3$ reduced arsenic mediated cytotoxicity in H9c2 cardiomyoblast cells. The cellular LDH release and lipid peroxidation were markedly increased with As$_2$O$_3$ treatment. The combined treatment of As$_2$O$_3$ with Vitamin C significantly reduced the lactate dehydrogenase leakage and lipid peroxidation. From the fluorescent microscopy measurements, we observed that As$_2$O$_3$ induced apoptosis can be reduced by co-treatment with vitamin C

Conclusion:

Vitamin C supplementation along with chemotherapeutic compound was found to be promising in reducing the cardiotoxicity in cancer therapy. Further research is needed to understand the molecular mechanism of action of vitamin C in cardiac cells

Keywords: Cardiotoxicity, Chemotherapy, Vitamin C

Nutrition and Health - *In vitro* and *in vivo* immunomodularory effect of thirst quenchers of keralaon murine   peritoneal macrophages

V. S. Sunitha, M. A. Sunil, E. K. Radhakrishnan and JyothisMthew

Dept. of Microbiology, School of Biosciences, Mahatma Gandhi University, Kottaym, Kerala

ICRMSW 2013

Corresponding Author
V. S. Sunitha
Email: sunithahpd@gmail.com
Cell no. 9497675319

Abstract

Introduction and Rationale

Acacia catechu, Caesalpiniasappan and *Vetieverzizaniodes*are medicinal plants which are used as thirst quenchers in southern part of India especially in Kerala. There is a general belief that the daily consumption of these plants as thirst quenchers is good for health. The study was designed based on the assumption that these plant extracts might have immunomodulatory effects. Since phagocytosis is an important nonspecific defense mechanism, the evaluation of the effects of these plant extracts on the phagocytic cells will be useful to assess their immunomodulatory potentials.

Objective

The present study was conducted to scientifically evaluate the effects of extracts of *Acacia catechu, Caesalpiniasappan* and *Vetieverzizaniodes*on phagocytic function of macrophages.

Materials and Methods:

In vivo effect of aqueous, ethanol and hexane extract of the above plants at two doses (10mg/kg body weight and 25mg/kg b.w.) were evaluated by oral administration of the extracts on swiss albino mice. Phagocytic indices of macrophages from various groups were determined. *In vitro*immunomodulatory potential of the above extracts at different concentrations (5μg/ml, 10μg/ml, 20μg/ml and 40μg/ml) was studied using peritoneal macrophages from Swiss albino mice.

Results

All extracts caused phagocytic modulation *in vivo*. The animals treated with aqueous extracts of *Acacia catechu and Vetieverzizaniodes*and the ethanol extractof *Caesalpiniasappan* at a dose of 25mg/kg b.w. showed significant ($p<0.05$) increase in phagocytic activity in comparison with the control. An increased phagocytic response was shown by murine peritoneal macrophages after treatment with the extracts *in vitro*. A dose dependent response was observed in all cases.

Conclusion:

The results of the present study indicates the immunomodulatory effects of *Acacia catechu*, *Vetieverzizaniodes*and *Caesalpiniasappan*extracts as evidenced by their effect on phagocytosis, which is a nonspecific immune mechanism. Since the elevated phagocytic response can improve the general health and immunity of an individual, the daily consumption of decoction of these plants as thirst quenchers can be promoted.

Keywords: *Acacia catechu*, *Caesalpiniasappan, Vetieverzizaniodes,* immunomodulatory effect, phagocytosis

Characterization of the antibacterial compound produced by the potential probiotic Lactic Acid Bacteria -*Enterococcus faecium* MBTU-P1F1 isolated from infant feces against typhoid fever pathogens

Anjali Anne Jacob and Keerthi T.R.

School of Biosciences, Mahatma Gandhi University, Kottayam, Kerala

This title is indexed in SciVerse Scopus

Improving research results through analytical power

embase®
BIOMEDICAL ANSWERS

ICRMSW 2013

Corresponding Author

Keerthi T.R.
E-mail:**keerthisureshbabu@gmail.com**
Telephone No:9497655293

Abstract

Introduction and Rationale

Lactic Acid Bacteria (LAB) are common components of the human commensal microfloradisplaying wide range of antimicrobial activities which include production of organic acids and bioactive molecules. Enterococci are LAB of importance in food and health and produce enterocinshaving promising commercial potential. Typhoid fever is an important cause of morbidity and mortality in developing countries andmultidrug resistant strains of *Salmonella typhi* are endemic in many parts of India. The emergence of antibiotic resistant bacteria and natural ways of suppressing the growth of pathogens has contributed to the concept of probiotics. Probiotic bacteria have attracted enormous attention as biotherapeutic agents and development of functional food products containing them.

Objective:

To identify and partially characterize the antibacterial compound produced by*Enterococcus faecium*MBTU-P1F1 against the enteric (typhoid) fever pathogens *Salmonella typhi*and *Salmonella paratyphi*A.

Materials and Methods

FTIR analysis for the detection of lactic acid, Chloroform extraction of the cell free supernatant of the strain, Test for siderophore production and H_2O_2 production, effect of enzymes on the activity of the inhibitor compound and finally LC/MS and MALDI-TOF/MS analysis for the detection of novel bacteriocin/ bacteriocin like substance .

Results:

The inhibitory action of the cell free supernatant of*Enterococcus faecium*MBTU-P1F1 was stable below pH 5 and in addition to the production of lactic acid, it also produced a compound whose activity was optimum at low pH. The inhibitory action was not due to hydrogen peroxide orsiderophore. Sensitivity to proteolytic enzymes proved the proteinaceous nature of the inhibitor compound. LC/MS and MALDI-TOF/MS analysis confirmed the production of a bacteriocin like substance by *Enterococcus faecium*MBTU-P1F1.

Conclusion

Characterization of bioactive compounds produced by LAB find enormous application in food and pharmaceutical industries as biotherapeutic agents leading to replacement of antibiotics for simple infections and as non-toxic biopreservative agents in the industrial processing of human food and animal feeds as, LAB have been recognized as safe owing to the GRAS status.

KeywordsLactic Acid Bacteria, probiotic,*Enterococcus faecium*MBTU-P1F1