

Gastroenterology & Nutrition Abstracts

Oral Presentation

Iron deficiency in infancy

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In the first year of life (and also to some extent in the second year of life), infants find themselves in a constellation that is conducive to iron deficiency: High demand for iron due to rapid growth combined with a diet that is typically low in iron (breast milk, cow milk, complementary foods). Despite this, most infants are protected from iron deficiency (ID) during the first 4-6 months of life because they are born with a sizable iron endowment. Occasionally, the endowment is unusually small, for reasons that we do not understand, and then the infant is at risk of ID early in life. When ID is associated with anemia (IDA), we consider it severe, and severe ID in infancy can impair neuro-cognitive development.

Cow milk: The feeding of cow milk, especially in large quantities, is associated with iron deficiency. Numerous studies around the world have documented that infants fed cow milk (pasteurized, full fat or reduced fat) are at risk of iron deficiency. The risk is proportional to the amount of cow milk consumed. The mechanism by which cow milk causes ID is primarily its low iron content. Other reasons are that cow milk can cause microscopic intestinal blood loss and that it inhibits the absorption of iron from other food sources. Even at 2 years of age cow milk can lead to ID. In a recent study from Iceland, those 2-year-olds who consumed more than 500 ml of cow milk each day were at greatly increased risk of being iron deficient compared to those who consumed less than 500 ml each day. Since formulas based on cow milk are fortified with iron, the feeding of formulas is not associated with ID.

Breast feeding: The iron content of breast milk is quite low, so that breast milk cannot meet the high iron needs of the infant for growth. During the first 4-6 months of life the breastfed infant is protected from ID by the birth iron endowment the infant has received from its mother. Some infants receive an unusually low iron endowment, and those infants are likely to develop severe ID early in life (about 2-3% of breastfed infants). These infants are difficult to identify because the ID occurs so early in life (before 6 months) when we traditionally do not think about ID and don't look for it. After 4-6

months breastfed infants depend on complementary foods for their iron intake. Fruits and vegetables are low in iron. The only foods that provide substantive amounts of iron are meats and iron-fortified foods, such as cereals. The use of medicinal iron, though effective, for the prevention of ID is controversial because it leads to a small slowing of growth. That is why the prevention of ID in breastfed babies should best rely on complementary foods that are high in iron, such as meats and iron-fortified cereals. Consumption of tea can inhibit the absorption of food iron, whereas foods high in ascorbic acid enhance the absorption of iron. The second year of life: Iron deficiency is not uncommon in the second year of life, but it is almost always of a mild degree and probably not very worrisome. Severe ID can occur, however. It is almost always associated with consumption of large quantities of cow milk and/or of foods with a high phytic acid content.

Key Words: Iron deficiency; Anemia; Breast feeding

Oral Presentation

Outcome of Chronic Constipation in Children Presented to Gastrointestinal Clinic of Ali-Asghar Children Hospital

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Objectives: Constipation is a common problem in pediatric patients. A variety of conditions including both organic and functional problems have been stated to cause constipation with the latter more prevalent according to previous studies, however, the long-term outcome of this affection has not been well established. This study was conducted to evaluate the outcome of chronic constipation in children presented to the referral children hospital in Tehran.

Methods and Subjects: In this retrospective cohort study, the charts of children referred for chronic constipation to Ali-Asghar Children hospital between September 1999 and September 2005, with the presenting age of 15 years or less, were selected to collect data on demographic variables, clinical features and diagnoses, as well as treatment strategies. We scheduled to get contact with the children or the parents in 2006 in order to ascertain the last state of constipation. Data analysis was performed with SPSS software for windows, version 11.

Findings: We followed 100 patients with a mean age of 4.8 years (± 0.2), equally divided into both sexes. The most common complaints were infrequent bowel

movements (100%), hard stools (95%), and painful defecations (93%). The most prevalent findings were hard stools (82%) and fecal impaction (80%) on digital rectal exam. The duration of constipation before presentation was 1.5 years (± 0.18). The median duration of follow-up was 4.3 years. Sixty-eight patients (68%) were improved after instituting treatment (mean time 49.3 days ± 2). The frequency of improvement by age and sex was not statistically significant but those reporting blood-streaked stools were less likely to improve ($P=0.018$).

Conclusion: This study showed that most of the children affected by chronic constipation were improved by implementing classic treatments. Having blood-streaked stools was of poorer prognosis.

Key Words: Constipation; Prognosis; Children

Oral Presentation

Clinical Characteristics of Iranian Children with Inflammatory Bowel Disease

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Objectives: Inflammatory bowel disease (IBD) is a group of disorders that primarily affect the small intestine and colon and includes Crohn's disease (CD), ulcerative colitis (UC) and indeterminate colitis (IC). This study was performed to define the demographic features and clinical characteristics of Iranian pediatric patients with IBD.

Methods and Subjects: Fifty nine patients with IBD, who have been referred to Children's Medical Center Hospital during a 10-year period, were investigated in this study. The data was gathered by interviewing the patients and their families, as well as reviewing their medical records.

Findings: Among 59 patients with IBD, 23 cases had UC, 19 cases had CD and 17 cases had IC. Patients with UC were significantly younger at the time of diagnosis as compared with patients with CD. The disease mean duration from onset to diagnosis was 8 months. The most common symptoms were abdominal pain, diarrhea, fever and growth failure. Hepatobiliary abnormalities,

arthritis, and mucocutaneous lesions were common extra intestinal manifestations. Occult blood in stool was seen in almost all patients, whereas anemia and leukocytosis were also common. Perianal diseases were reported in 14 CD patients.

Conclusions: Such epidemiological data on pediatric patients with IBD could help health care workers to improve diagnosis and treatment of IBD cases who present their symptoms at this early age.

Key Words: Crohn's disease; Inflammatory bowel disease; Pediatrics; Ulcerative colitis

Oral Presentation

Helicobacter Pylori: A Risk Factor for Proteinuria in Children

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Objectives: *Helicobacter pylori* infects at least 50% of the world's human population. In most children, the presence of *H. pylori* infection does not lead to clinically apparent disease. *Helicobacter pylori* infection and its possible relationship to different diseases are a focus of attention nowadays. There have been many new reports dealing with extra-gastrointestinal conditions and simultaneous *H. pylori* infection. Beside some cardiovascular and respiratory system diseases, *H. pylori* infection is also involved in the etiology of some autoimmune diseases, including atopic dermatitis and idiopathic thrombocytopenia. Since *H. pylori* is thought to be an etiological factor in endothelial dysfunction, it also may have a role in proteinuria by this mechanism. Some investigators have found *H. pylori* antigens in the glomeruli of patients with membranous nephropathy. In this article, we want to investigate the epidemiologic relationship between *H. pylori* infection and the presence of proteinuria in pediatric age group in Iranian children.

Methods and Subjects: The study subjects were selected from inpatients with proteinuria who had been admitted in the department of pediatric nephrology, the Mofid Hospital (Tehran, Iran) in February 2008 to January 2009. Those who were between 3-12 years old with proteinuria due to any etiology were selected to enter the study. We selected the same number of inpatients without any proteinuria as the control group. For all these subjects, Urea Breath Test (UBT) was performed by a pediatric gastroenterologist.

Findings: During the study time, we selected 100 cases and 100 controls. The mean age of case group was 6.4 yrs, with 42 female and 58 male. The mean age of control group was 6.6 yrs, with 46 female and 54 male. In 100 patients with proteinuria, 58 cases (58%) were UBT negative and 42 cases (42%) were UBT positive. In 100 control cases without proteinuria, 92 cases

(92%) were UBT negative and 8 cases (8%) were UBT positive.

Conclusion: Our study shows that with a $P < 0.001$, there is a statistically significant relationship between *H. pylori* infection and proteinuria in children. We speculate that, by causing endothelial dysfunction, increased production of some autoantibodies and inflammatory cytokines, *H. pylori* may be an etiological factor in pathogenesis of proteinuria which is an indicator of early renal dysfunction.

Key Words: *Helicobacter pylori*; Proteinuria; Nephropathy

Oral Presentation

What Measurements to Reduce the Admission of Acute Gastroenteritis in Resource?

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Objectives: To determine the incidence of hospital admission for acute gastroenteritis in children below 5 years and to identify factors that probably, reduce the hospital admission of these cases.

Methods and Subjects: Descriptive study (Longitudinal hospital based study) during the period of one year in Pediatric Department, Misurata Teaching Hospital. All hospital admissions of the children under the age of five and older than two months with clinical symptoms of acute gastroenteritis are included in the study. Before entry to study, clinical assessment of degree of dehydration was performed. Dehydration severity was categorized and treated according to the level of dehydration either mild, moderate, or severe dehydration. The main outcome measures are percent of body weight gain at rehydration and at resolution of illness.

Findings: Based on the results of this study, AGE was estimated at rate of 11.6% from the total hospital admissions (1092) in children below 5 years. 49 patients (38%), 58 patients (46%), and 20 patients (16%) were diagnosed clinically as mild, moderate, and severe dehydration, respectively (84% mild-moderate dehydration). In our unit 96 patients (76%) were managed by intravenous fluid. 28 patients (85% from ORS treatment group) were responded to ORS treatment and discharged without intravenous fluid.

Conclusion: It is very clear from our result that ORS can be very effective if appropriately used for patients with mild and moderate dehydration. ORS administered in the observation room or at home

with close follow-up will effectively reduce hospital admission.

Key Words: Acute gastroenteritis; ORS; Observation room; Reduced hospital admission

Oral Presentation

Which Rectal Disimpaction Protocol Might Be Better for Childhood Habitual Constipation?

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Objectives: Constipation is a common symptom in children accounting for 3% general pediatrician outpatient visits and up to 25% of visits to pediatric gastroenterologists. Worldwide prevalence of childhood constipation vary from 0.3% to 28% and it seems to be rising over the last years. Stool withholding behavior can result in gradual but significant fecal impaction. This not only bothers the child but also may cause encopresis and overflow diarrhea. Disimpaction is necessarily the 1st part of therapeutic schedule and is possible through different protocols.

Methods and Subjects: All of the children 3 to 10 year of age attending a private pediatric gastroenterology clinic in Lorestan province, IRAN for constipation during a 18 month period were assessed. After excluding the children with the so called "red flags for childhood constipation", 60 children with habitual constipation and fecal impaction which adhered to treatment were enrolled in an interventional study. Participants were randomly divided into two groups. Both groups received disimpaction per os for 3 consecutive days. The disimpaction used was PEG without electrolyte (1g/kg/day) and mineral oil (20ml/yr of age/day) for groups A and B respectively. On the 4th day, the ease of the bowel movement, possibility of fecal incontinence and patient and/or parents' compliance were compared between groups.

Findings: From all 32 patients in group A, 30 ones had a soft bowel movement on the 4th day. There was one report of fecal incontinence despite correct drug usage. The treatment was reported feasible and the drug palatable by all of the 32 children. 24 from all 28 patients in group B, had a soft bowel movement and 4 experienced diarrhea, oil discharge and underwear staining. 17 children or parents complained from unfavorable and greasy taste of mineral oil.

Conclusion: It was apparent with meaningful P values (in all three eras less than 0.001) that PEG should be considered as an effective, desirable and palatable drug for disimpaction in childhood constipation. Many Iranian pediatric gastroenterologists are not used to prescribe PEG for either disimpaction or maintenance regimen for constipated children yet. Further trials can prove its convenience for pediatric use.

Key Words: Childhood constipation; Disimpaction; Mineral oil; PEG

Oral Presentation

Study of Helicobacter Pylori Infection in Diabetic Cases

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Objectives: Helicobacter pylori is one of the most important pathogen in the gastrointestinal tract. There is some report about helicobacter pylori and diabetes mellitus. The aim of this study was to evaluate helicobacter pylori infection in cases with diabetes mellitus (Type I).

Methods and Subjects: This case control study was carried out in Mofid Children's Hospital and Loghman Hospital during 2008-2009. Diabetes in each patients was confirmed by an experienced pediatrician with subspecialty in pediatric endocrinology. Each diabetic cases who had not history of antibiotic therapy in 2 months ago were included in this study. Urea breath test was done with ISOMAX 2000 made by Canada. 49 cases (M:28, F:21) underwent urea breath test to detect H. pylori infection. 108 controls, who without history of antibiotic therapy and diabetes were selected. Urea breath test was performed for all controls children. Chi-square test was used for analysis with SPSS ver 11.5.

Findings: Forty-nine cases with mean age 8.1 ± 2.6 (3.5-13) years were studied. From cases group, 14 cases had positive UBT test. From 108 control persons, 30 (27.8%) [M=16 (27.6%), F=14 (28%)] had UBT positive results. From 49 cases, 14 cases (28.6%) had positive UBT. In case group, 28.6% in male and female group had positive results ($P > 0.05$). In our cases, 10 cases had abdominal pain, 6 cases had anemia, 8 cases had vomiting.

Conclusion: We did not find significant differences between two groups. Another study with more sample is recommended.

Key Words: Helicobacter pylori; Diabetes mellitus;

Oral Presentation

Effect of Probiotics on Treatment of Helicobacter pylori in Children

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Objectives: Helicobacter pylori (H.P) is a common infection in general population (particularly in children of un- development countries). Long term infection of it causes peptic ulcers & gastric cancer. There are many protocols for treatment of it, but we decided to experiment probiotics for this mean.

Methods and Subjects: We chose 30 patients with sings & symptoms denoting H.P and documented by endoscopy and biopsy (rangs of their ages were between 5-18 yrs). Then we separated them to two groups (A.15 patients thestandard protocol was used; B.15 patients only probiotics were used). (groupA: 7 males & 8 females; groupB: 7 males & 8 females).

Findings: After 2 weeks of treatment we had these results: 14 patients of group A were treated but 8 patients of group B were treated at the end of two weeks but longer duration of treatment for another 2 weeks; no change in number of treatments in A but in B, number of treated individuals became 11 patients without any side effects ($p < 0.05$).

Conclusion: We used probiotics for many problems for example: viral diarrhea, IBD, dermatitis ezema, food allergy, and We suggest them for H.P treatment but there are little investigations about them. According to our study, probiotics are useful for treatment of H.P in children without any side effect compared with standart protocol.

Key Words: Probiotics; H. pylori; Children

Oral Presentation

Comparison of Breast Feed Infants with Formula Fed for Risk of Diarrhea

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Objectives: Breast feeding is the ideal method of infant feeding. Breast feeding has been well documented to prevent and attenuat the diarrheal diseases, but few cohort studies have compared exclusive breast fed infants with formula fed. The aim of the present study was comparison of exclusively breast fed infants and formula fed for diarrhea.

Methods and Subjects: In a historical cohort study 60 infants (0-6months aged) exclusively breast feed were compared with 60 formula fed with the same age for risk of diarrhea among 6 months.

Findings: 5% of breast fed infants and 23.4% formula fed had diarrhea through the first 6 months of age ($P=0.02$). 10% of formula fed but none of breast fed infants were hospitalized ($P=0.01$).

Conclusion: Breast feeding, especially exclusively decreases diarrhea diseases and the need of hospitalization of infants.

Key Words: Breastfeeding; diarrhea; formula fed

Poster Presentation

Comparison of Atropine Sulfate with Pyloromyotomy for Treatment of Infantile Hypertrophic Pyloric Stenosis

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Objectives: Infantile hypertrophic pyloric stenosis (IHPS) is a condition of hypertrophy of the pylorus, with elongation and thickening, eventually progressing to near-complete obstruction of the gastric outlet. Definitive management of IHPS is Ramstedt pyloromyotomy. However, conservative treatment of infantile hypertrophic pyloric stenosis with intravenous atropine also has been described. We assess the efficacy of intravenous atropine treatment for IHPS in Urmia and Shiraz.

Methods and Subjects: In this clinical trial the patients with complaints of persistent vomiting and later clinically and sonographically diagnosed as cases of IHPS were selected and atropine sulfate was given intravenously at a dose of 0.01 mg/kg/q3h eight times a day, 20 minutes before feeding (up to 7 days) in 26 patients (with informed consent) and compared with 26 cases of pyloromyotomy. When vomiting ceased for 24 hours, the infants were given 0.02 mg/kg/q3h atropine sulfate eight times a day orally for another two weeks. The doses were increased 0.2 mg/kg everyday in both approaches if vomiting continued. Cost of treatment, length of the hospital stay, body weight and weight gain compared in two groups. After completion of treatment and at 6, 12 and 24 months follow up the patient's weight and length were calculated for age according of CDC growth charts.

Findings: Of the 26 infants, three were excluded because of associated anomalies (Down syndrome, cystic fibrosis and renal abnormality) and 19 (82.6%) ceased vomiting after treatment with intravenous (median 4.6 days) and subsequent oral

atropine administration. Complications included transient tachycardia in two patients, facial flushing in two patients and mild and transiently elevation of liver transaminases in one patient. The remaining four infants required surgery. Of 26 who underwent surgery, 2 had wound infections and 1 of them had six days re-admission due to sepsis like condition 4 days after first discharge. Cost of treatment and length of the hospital stay in surgical group were more than medical group. All patients exhibited failure to thrive at presentation, but were thriving in both groups and median weight and length of patients who treated successfully with atropine sulfate at the ages of 6, 12 and 24 months were normal as well as surgical group.

Conclusions: Intravenous atropine therapy is an effective, safe, cheap and acceptable treatment option for IHPS.

Key Words: Infantile; Hypertrophic pyloric stenosis; Atropine sulfate; Pyloromyotomy

Poster Presentation

International Statistical Classification of Digestive system disorders of newborn

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The International Statistical Classification of Diseases and Related Health Problems (most commonly known by the abbreviation ICD) provides codes to classify diseases and a wide variety of signs, symptoms, abnormal findings, complaints, social circumstances and external causes of injury or disease. Every health condition can be assigned to a unique category and given a code, up to six characters long. Such categories can include a set of similar diseases. ICD-10-CM contains the following codes for Digestive system disorders of newborn: P76 Other intestinal obstruction of newborn [Excludes1: meconium ileus in cystic fibrosis (E84.11)], P76.0 Meconium plug syndrome-Meconium ileus NOS, P76.1 Transitory ileus of newborn [Excludes1: Hirschsprung's disease (Q43.1)], P76.2 Intestinal obstruction due to inspissated milk, P76.8 Other specified intestinal obstruction of newborn [Excludes1: intestinal obstruction classifiable to K56.-], P76.9 Intestinal obstruction of newborn, unspecified, P77 Necrotizing enterocolitis of newborn, P78 Other perinatal digestive system disorders [Excludes1: cystic fibrosis (E84.0-E84.9)], neonatal gastrointestinal hemorrhages (P54.0-P54.3)- P78.0 Perinatal intestinal perforation Meconium peritonitis, P78.1 Other neonatal peritonitis- Neonatal peritonitis NOS.

Key Words: Classification of diseases; Digestive system disorders; Newborn

Oral Presentation

Approach to the Patient with Occult Gastrointestinal Bleeding

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Occult GI Bleeding (OGIB) refers to positive fecal occult test (PFOT) and/or iron deficiency anemia without any evidence of gross blood loss. Obscure bleeding is persistent or recurrent occult or visible GI bleeding without any known sources after upper GI endoscopy (UGIE), colonoscopy and radiological evaluation of small bowel. There are many lesions which may cause OGIB. Bleeding from nose, gums, peptic disease, vascular malformations, benign or malignant polyps, diverticulae, endometriosis, hemobilia, small bowel ulcers, IBD, hemorrhoid and anal fissure are some examples. Celiac disease may be found in iron deficient patients. In the evaluation of the patient age, symptoms, signs, drug consumption and family history should be considered. UGIE: The procedure of choice for children and young adults. Colonoscopy: The first procedure of choice for adults and the second one in children after UGIE. Virtual colonoscopy or CT colonography is a new non-invasive technique, but still less sensitive than colonoscopy. The patient who has only PFOT without either symptoms or iron deficiency anemia and a reliable UGIE and colonoscopy needs no more evaluation. Otherwise, the patient will need more as below: Barium meal or follow through with per-oral ingestion of diluted barium. Enteroclysis: A double contrast study injecting barium and air through a nasoenteric tube. Enteroscopy with a colonoscope to reach longer portions of small bowel. Push Enteroscopy with a long UGIE measuring 220-250cm to reach proximal 150cm of small bowel. Double Balloon Endoscopy with a sequential inflation of two balloons and passage of an overtube to visualize entire small bowel. Video Capsule Endoscopy is a sensitive and non-invasive.

The capsule is ingested per-oral and will be excreted with feces. A sensor belt is worn to record the images. After 8 hours the sensor is removed and images will be processed. Radionuclide Scan detects 0.1-0.5 mL/minute bleedings. The scan is sensitive and non-invasive, but only shows area of the bleeding in the abdomen. Angiography is not usually used unless the patient who has severe enough anemia to need transfusion. Laparotomy will be done for those who have severe anemia and above mentioned procedures failed to show the source of bleeding. Intraoperative Enteroscopy allows better inspection of small bowel with the guidance of the surgeon.

Key Words: GI bleeding; Occult; Fecal blood test

Oral Presentation

Iron Deposition in Duodenal Mucosa; A Review and Report of Three cases in Pediatric Age Group

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Background: Ferrous sulfate drops are routinely used in our country in infants above 6 months of age, however effect of ferrous sulfate drops in preventive or therapeutic doses on gastrointestinal mucosa of infants is not studied as yet. Although, upper gastrointestinal complications due to acute iron poisoning are well known in this age group.

Case Presentation: We encountered three cases of iron deposition in duodenal mucosa among near 8000 biopsies during a 10 year period which is a very low incidence despite routine use of iron supplement in children above 6 months of age in our country. One of our cases suffered from steatorrhea and one from failure to thrive, which raises concern about effects of iron deposition in small intestine.

Conclusion: The clinical significance and effects of iron deposition in pediatric age group is yet to be elucidated, in this article we wanted to review different articles about iron deposition in upper gastro-intestinal tract and also introduce the clinical, endoscopic and histologic findings in our cases.

Key Words: Iron; Duodenal mucosa; Ferrous sulfate

Poster Presentation

Consideration of 1 to 2 Year – Old Infants Mother Knowledge about Iron Drop

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Objective: Healthy Knowledge is as important as presence of healthy equipments, for example maternal knowledge about iron supplement is important as presence of iron supplement because of that Iranian health ministry provides iron drop for all infants to

prevent iron deficiency, but desired Results can not be obtained.

Method and Subjects: We used data obtained from 349 mothers who responded to questions and had 1-2 year old infants who had come to urban health center for control of their children. Then maternal knowledge compared with maternal age and education and with time of infant birth and age. Thus maternal knowledge about use of iron drop was considered.

Findings: From 349 mothers 10.5% had little knowledge. 13.5% had average knowledge and 76% had adequate knowledge about iron drop. In this investigation with increase in mother's age or number of babies maternal knowledge decrease and with increase of mother's education their knowledge increase. (P-value equaled 0.0001). With increase of infant age maternal knowledge increase (P-value=0.006) 39.3% of mothers had adequate knowledge about use of iron drop (p-value= 0.0001)

Conclusion: This investigation conducted to show that Zanjanian mother's knowledge about iron drop is adequate and related by age of mother's age of infant, number of babies and mother's education.

Key Words: Iron drop; Mother's knowledge; Iron deficiency

Poster Presentation

The Effect of Training Mothers on Their Nutritional Knowledge, Attitude and Practice

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Objective: Improve the level of knowledge, attitude and practice of mothers on nutrition in children under 6 months.

Method and Subjects: The study is an interventional study with duration of seven months starting from May till November 2007 and will be carried out on all children under gathered using a questionnaire consisting general questions and anthropometrical measurements. Phases of implementing the project determine current nutrition status Knowledge, attitude and practice (KAP) in mothers. Refer malnourished children to nutrition counseling centers train mothers on child nutrition and monitor and evaluate.

Findings: At the beginning of the study the mean points for knowledge, attitude and practice of mothers on principles of nutrition in children were 71.2%, 68.6% and 69.3% respectively. These figures reached 85.6%, 74.4% and 82.1%,

respectively after the intervention. The changes were statistically significant (P<0.01, P<0.05 and P<0.05 respectively). The mean points gained by mothers living in satellite villages were lower than mothers living in the main villages before and after the intervention Knowledge level in mothers of healthy children was significantly higher than mothers of malnourished children prior to the intervention (72.1% compared to 66.3% respectively, P<0.05) Mean knowledge, attitude and practice levels in mothers of both healthy and malnourished children was significantly higher after the project compared to its start.

Conclusion: Our results showed that training mothers in the principles of nutrition in children improves their nutritional knowledge, attitude and practice, increasing the mean points obtained in each of these from a previous mean level of 71.2%, 68.6% and 69.3% respectively to 85.6%, 74.4% and 82.1% after the intervention. Gathering information on their knowledge and practice levels can help health personnel on child nutrition and out carrying appropriate training sessions to improve the nutritional status in children.

Key Words: knowledge; Attitude; Practice; Nutrition

Poster Presentation

Comparative Study of Growth Criteria between Breastfeeding and Formula Feeding under 12- Months- Old Infants from 2005 to 2005

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Objective: In the first six months of all babies' life, breast milk is the best choice for feeding, because it has many nutrient and non- nutrient substance which are beneficial. Breast milk prevent from several diseases such as lymphoma, collagen vascular. Moreover, breast milk, however. Contains antibody antibacterial, antivirus that decrease probability of infection.

Method and Subjects: 1 to 12 month old breastfeeding babies, who were referring to medical centers, were being tested from growth parameters (weight, length and head size) points of view and a questionnaire was filled about the way of feeding start and finishing time of feeding.

Findings: Based on our studies, growth criteria of breastfeeding and formula-feeding children according to sex, were the same and with respect to age, just in four-month-old children weight increasing in breastfeedings was more than formula-feedings and in six and twelve month old children the reverse of this relation is true. In this study breastfeeding babies with educated mothers had better growth criteria in compare

with others and also there was no difference between breastfeeding and formula- feeding babies whose mothers are housewives; but if their mothers were working outside, then growth criteria in breastfeeding were more than formula- feeding babies.

Conclusion: According to all of explanation, even with presence of high growth criteria in some of these groups between formula is suggested because it prevents them from many illnesses.

Key Words: Breastfeeding; Formula feeding; Growth

Poster Presentation

The Status of Breakfast Consumption among Primary School Children in the North of Iran

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Objective: Nutritionists have traditionally recognized breakfast as the most important meal of the day. The importance of eating breakfast is for growing and educational promotion in students. Differences in breakfast composition may account for some of the contradictory Results across studies. This study set out to evaluate eating

breakfast among primary school children and some demographic factors relationship with it in whole of Golestan province (north of Iran) in 2008.

Method and Subjects: This cross-sectional study was performed on 7426 students (3786=male and 3640=female) from 112 schools in urban and city area that were chosen by cluster and stratify sampling. A questioner was completed for all samples by interview. The consumption of breakfast and some factors effect on such as ethnicity, residential area, literacy and type of school computed in this study. Data analysis was carried out using the spss.win 16.

Findings: Consumption of breakfast were shown among 91.7% of students (female= 90.1% and male=93.3%). Consumption of breakfast was 8.7% in public school more than in private school children and in Turkman ethnic groups (94.0%) is significantly more than other ethnic groups such as Fars (90.4%) and Sistani (91.6%) (P=0.001). There is a statistical significant differences between gender and type of school, separately (P=0.001). The most reasons for lack of breakfast eating are low appetite (70.1%), non-flavorful foods (11.8%), inattention of mothers (5.2%) and others factors (13%).

Conclusion: Lack of breakfast eating is one to eleven of students and social-demographic factors such as ethnicity and social level based on type of school effects on it. With regard to roll of breakfast eating in educational promotion, recognition and solving the obstacle factors for eating breakfast in students were recommended.

Key Words: Breakfast; Students; Ethnicity; Iran