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EVALUATION OF AN EDUCATIONAL INTERVENTION ON UNINTENTIONAL INJURIES IN CHILDHOOD

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Introduction: Unintentional injuries (UI) are a major cause of morbidity and mortality in children. The parent's knowledge of this problem is important for prevention. **Objective:** to assess the impact of an educational intervention in UI. **Methods:** Families with children aged 5 to 8 years, attending to a school at Buenos Aires City were eligible. The intervention included basic safety advice regarding home-related UI. A closed, anonymous, self-administered questionnaire (including 10 questions regarding the most common home-related UI) was administered before and after the intervention. The intervention impact was estimated by calculating the number of questionnaires with all questions correctly answered before and after (Mac Nemar Test, Chi square). Also, sociocultural variables (parents' age and education level, family profile, number of children and type of school) were evaluated as predictors for UI knowledge, using "all questions correctly answered" as outcome measure (Binary Logistic Regression). Significance level $p < 0.01$. **Results:** 1147 pairs of questionnaires were evaluated. After the intervention, the rate of all questions correctly answered increased significantly (10.3% vs 57.2%; $p < 0.0001$). Older mother (expB:1.05 IC95% 1.01-1.08), better educational level (expB: 5.88 IC95% 1.35-25.72), less number of siblings (expB:0.74 IC95% 0.59-0.92) and both parents living at home (expB:2.71 IC95%1.39-5.24) were significantly associated with all questions correctly answered. This association disappeared after our intervention. **Conclusion:** The educational intervention significantly increased parent's knowledge about UI. The differences linked to sociocultural status were compensated by a low-cost intervention. The impact of these interventions on UI incidence must be assessed.

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STUDY COMPARATIVE OF THE EFFECT AGAINST THE FEVER OF THE ACETAMINOPHEN VS IBUPROFEN IN CHILDREN OF 6 MONTHS TO 6 YEARS OLD

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Objective: To compare the effectiveness of the ibuprofen and acetaminophen in children with fever. **Subjects and Methods:** Design: An experimental study (controlled, randomized, double blind) was performed, with design of clinical test. Subjects: Febrile children from 4 months to 10 years of age, receiving medical care in a emergency service. Interventions: At random each boy was assigned to receive a single dose of acetaminophen (15mg/kg), ibuprofen (10mg/kg) or placebo (5 ml/kg). **Results:** 197 patients were included in the study, 64 were administered with acetaminophen, 67 ibuprofen and 66 placebo. The temperature was measured at the moment the patient's arrival; then it was measured 10, 20 and 30 minutes and 1, 2, 3, 4, 5 and 6 hours later. It was managed to decrease the temperature below 38°C in 55 patients receiving acetaminophen, in 56 patients receiving ibuprofen and in 32 patients receiving placebo. The comparison between each of them was made to value the effectiveness. Between acetaminophen and ibuprofen was obtained $\chi^2 = 0.14$, $p = 0.70$; between acetaminophen and placebo $\chi^2 = 20.43$; $p = 0.000006$; between ibuprofen and placebo $\chi^2 = 18.16$, $p = 0.00004$. **Conclusions:** The antipyretic effectiveness of acetaminophen and ibuprofen is significantly greater than placebo. Between acetaminophen and ibuprofen, we did not observe statistically significant differences.

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INCIDENCE OF CALCIVIRUS IN SEVERE ACUTE DIARRHEA

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Introduction: The Calicivirus, as agents of infantile acute diarrhea, constitute an emerging cause in Pediatrics; however no study in our national environment is available. **Objective:** To study the incidence of Calicivirus in severe acute diarrhea in patients 0 to 3 years. **Material and methods:** Design: Prospective study, not interventional. Between January and June, 2003 all the patients < 3 year old consulting for acute diarrhea in the emergency units at the hospitals of the Concepcion and Talcahuano cities, Chile that required oral rehydration or intravenous fluids according to procedures of the World Health Organization, were evaluated. Calicivirus was studied in fecal samples by immuno enzyme trial (ELISA). **Results:** 211 patients fulfilled the protocol requirements in the period of study; 23 patient presented positive ELISA for Calicivirus, corresponding to the 10.9%. Also 96 were positive for rotavirus (45%). **Conclusion:** Calicivirus is an important agent of acute diarrhea severe in Chilean children.

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PROBIOTIC POTENTIAL OF BIFIDOBACTERIUM SPP ISOLATED FROM HEALTHY INFANTS

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Background: Bifidobacterium are recognized as probiotic microorganisms since they provide several health benefits to human hosts including improvement of lactose utilization, increased immunity in animal hosts and antagonistic effect towards pathogenic bacteria. Safety and survival during passage through the human gut as well as their ability to resist technological handling are among the requirements asked to a probiotic bacteria. **Objective:** To evaluate the "in vitro" antimicrobial activity, tolerance to acidic conditions and to bile salts in Bifidobacterium spp isolated from healthy infants. **Methods:** Fifteen bifidobacterial strains isolated from faecal samples from Chilean infants were evaluated. The antagonistic effect of bifidobacteria towards Escherichia coli O157:H7 ATCC 35150 and Salmonella enterica isolated from food (AI-75) was studied by the agar spot test in MRS agar and sodium bicarbonate buffered (2g/l) MRS medium. The tolerance to acidic conditions was determined using a microplate assay MRS broth at different pH (4.0, 4.2 and 4.5). The bile tolerance was done in the same way, but using MRS -3% bile salt broth. **Results:** 9/15 (60%) bifidobacterial strains produced inhibition zones larger than 15 mm towards both enteropathogens. Only 3/15 (20%) strains showed no effect. When the same strains were tested on bicarbonate buffered MRS agar 3/9 strains previously tested showed antimicrobial activity, but only one them maintained the inhibition zones towards at least one of the pathogens. Even though none of the bifidobacteria was able to multiply in the acidic conditions tested 4/15 strains remained viable. Finally, 3/15 bifidobacteria tolerated bile at 0.3%. **Conclusions:** 6 bifidobacterial strains are now available, that inhibit Salmonella enterica "in vitro", although the mechanism is unknown it should be different to the production of organic acids, in addition one of the strains resists bile salts and acidic conditions.

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EFFICACY OF A RICE BASED ORAL REHYDRATION SOLUTION CONTAINING HUMAN RECOMBINANT LACTOFERRIN AND LYSOSYME IN CHILDREN WITH ACUTE DIARRHEA

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Introduction: Lactoferrin (LF) and lysozyme (LZ) have a wide spectrum of antimicrobial activity. Addition of human recombinant LF and LZ to an ORS may have a beneficial effect on diarrhea. **Objective:** To compare efficacy of glucose (WHO) and rice based ORS with rice based ORS containing recombinant human LF and recombinant human LZ in acute diarrhea in children. **Methods:** Randomized controlled trial in 140 boys aged 3-36 months with acute diarrhea and dehydration admitted to the Oral Rehydration Unit (ORU) of IESN in Lima, and Belen Hospital, in Trujillo, Peru. At entry children were randomly assigned to 1) glucose ORS (OMS), b) rice-based ORS or, c) rice based ORS plus LF and LZ. Intake and output were monitored for 48 hours in the ORU, with home and clinic follow up for 12 days. **Results:** Intention to treat analysis of the combined control treatments versus LF and LZ group showed a decrease in duration (5.21 versus 3.67 days, $p=0.05$) and increase in the number of children who achieved 48 hours with solid stool, 69.2% versus 85.1% ($p < 0.05$). There was a non-significant decrease in volume, and in the percent of children who had a new diarrhea episode in the treatment group. Overall intake of ORS was 1910 mL in the treatment group versus 2162 mL in the control groups ($p=0.18$). No child required intravenous rehydration or developed persistent diarrhea. **Conclusion:** This study demonstrated the efficacy of the addition of recombinant human LF and LZ to a rice-based ORS in acute diarrhea in children.