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CONTROL OF UROPATOGENIC E. COLI BY LACTOBACILLUS FERMENTUM PRODUCER OF H2O2.

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Lactobacilli are part of the normal flora of the genitourinary tract. When present, they can competitively exclude uropathogenic microorganisms, being various the factors responsables of this inhibition: production of bacteriocins, acid, H2O2. As E. coli is one of the most frequent pathogens isolated from urinary infections in children and in pregnant women, the objective of this work is to study the H2O2 production by L. fermentum (isolated from the urogenital tract of mice) and its inhibitory effect against uropathogenic E. coli.

L. fermentum produces a maximun of 8.6 nmols/min/10^6 cells at 3 hours culture, being stable up to 24 hours. In mixed cultures of lactobacilli and E. coli, the inhibition increases by addition of mieloperoxidase and halide.; at 4 hours, the pathogen decreases from 10^9 to 10^7 CFU/ml, while the lactobacilli is stable. The number of viable microorganisms was determined by the succesive dilution method, employing selective culture media. Our results reflect the importance of H2O2 produced by lactobacilli and the peroxidase present in the urogenital ecosystem as an inespecific defense mechanism and of bacteria antagonisms against the urinary infections producer pathogens.

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ASSESMENT OF LEARNING STRATEGIES TO IMPROVE PEDIATRIC INTERVIEW'S QUALITY.

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Requirement to insert strategies that make possible a grater emphasis in the comprehensive view of the patients and their families within a residence program in clinical pediatrics, in a third reseral level hospital, compelled us to improve the quality of the pediatric interviews.

In a previous investigation, it was proved that residents appropiately identified the patients problems but there were mistakes in the interview technique and in the medical indications given to the parents.

Twenty residents were evaluated. Thirteen first year residents attended children interviews performed by an senior phisician; seven through a Gessell chamber and six by video. Seven residents did not received any special instruction but their own experiences in supervised outpatiens care.

To evaluate the result of this tesching strategy, every one underwent an interview with specially trained simulated mothers.

The interview's quality was submitted to a previously standardized score.

Medical records, written medical indications given to the mother to satisfy family and patient requirements, and the score given by the simulated mother were registered.

Results showed better management among the residents that received training. Residents exposed to Gessell chamber had better scores than those who watched the video.

Simulated mothers is a usefull evaluation instrument, specially when the tutor's pesence may disturb the medical interview.

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EVALUATION OF CLINICAL AND LABORATORIAL PARAMETERS DURING LACTOSE ABSORPTION TEST: ORAL LOAD WWITH LACTOSE AQUEOUS SOLUTION AND COW'S MILK.

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Lactose absorption tests were studied in 7 malnourished infants with chronic diarrhea, 3 - 7 month old, with the aim to assess the value of some clinical and laboratory parameters evaluated during the oral load of lactose (2g/kg), both in aqueous solution (OLS) and after 7 days, with cow's milk (OLM). Mean "score z" weight/age, height/age and weight/height were, respectively:

-3.0±1.6, -2.4±1.1 and -1.9±2.0. Mean d-xylose was 16.4±6.6 mg/dl and moderate villous atrophy was shown in jejunal biopsies. After overnight fasting, during lactose test, blood glucose, stool pH and reducing substances (RS) and hydrogen breath test were analyzed. After 180 min. we observed the following clinical features: abdominal distention in 6 patients loaded with OLS and OLM; increased bowel sounds were observed in 7/OLS and in 5/OLM; diarrhea in 5/OLS and in 4/OLM. Four/OLS and 3/OLM were nonabsorbers; pH less than 6 was observed in 4/OLS and in 3/OLM; mean RSwas 1.25±0.8 mg/dl with OLS and 0.25±0.0 mg/dl with OLM (p=0.015); H2 was 37.6±40.1 ppm with OLS and 8.9±5.3 ppm with OLM (p=0.07). In conclusion, our data showed similar clinical and laboratory findings with OLS and OLM. In addition, a better tolerance was found with cow's milk. The more sensitive tests were the stool reducing substances and the hydrogen breath test with oral lactose aqueous solution.

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METHOTREXATE (MTX) IN THE TREATMENT OF CORTICODEPENDENT ASTHMATIC CHILDREN.

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Low doses of MTX have been used in the treatment of corticodependent asthmatic children. The association of MTX to regular treatment has been shown to reduce the amount of oral steroids and sometimes its complete withdrawal, problaby due to its anti inflammatory effects. We studied MTX treatment (0.06 mg/kg/week) in 5 allergic asthmatic corticodependent (oral prednisone) children (6 to 14 years old) during a 5 months period. The regular medication was mantained (long acting theophylline, beta 2 agonists, ipratropium bomide, beclomethasone dipropionate) during the period of study. The children were evaluated at 15 days intervals and the prednisone dose was reduced after clinical and pulmonary function tests (PFT).

BASAL	MONTHS AFTER MTX				
	1º	2º	3º	4º	5º
Prednisone X=724mg/month	89*	70	54	41	36
FEV1 (% predicted) X=58%	61	76	78	68	72
FEF 25-75% (% predicted) X=40,3%	43	59	65	54	53

* % of the original dosage. A reduction in the prednisone dose, mild improvement in the PFT and no side effects during MTX treatment was observed. We concluded that MTX could be a reasonable addition for the treatment of asthmatic corticodependent children.

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CAN GLYCEMIA IN NEWBORNS BE DETERMINED BY HAEMO-GLUKOTEST?

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Newborns in NICU need serial glycemia controls. Hypoglycemia should be detected to prevent severe sequelae. High glucose flow-rates are usually given to provide a high caloric intake, however this can lead to hyperglycemic glycosuria and dehydration. The correct handling of these patients makes necessary have a rapid and reliable method for the detection of values outside the safe range. The present study was designed to determine if the glycemia (Gly) level obtained by the Haemo-glukotest (Haem) correlates with the (Gly) obtained by fliemeoxidaze wilbord, making thus possible its use as a screening test to detect abnormal values. Ninety five samples were obtained between December 1992 and April 1993 for the simultaneous determination of Haem, Gly and hematocrit (Ht). Gly samples were fluoridated before sending to the laboratory. The same nurse (E.R.L.) obtained the Haem results at the NICU. Correlation between Gly and Haem was determined by using a correlation matrix (Microstat) considering r> 0,8 as positive correlation. Correlation between Gly and Haem was found to be low (r: 0,56). Haem was ≤ 40 mg% in 8 cases; 4 corresponded to hypoglycemia, whereas 4 did not agree to laboratory results. Haem was ≥ 160 mg% in 16 cases; simultaneous Gly values were never higher than 107 mg%. All Haem values between 80 and 160 mg% corresponded to normal Gly. Results were similar throughout all Ht performed values. These results show that with Haem values within the 80-160 mg% range, Gly is normal in % of case. It was then concluded that Haem is a suitable screening method; whereas for values outside the normal range it becames imperative to asses the real Gly values by a laboratory method.

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ACUTE VIRAL RESPIRATORY INFECTIONS IN THE NEWBORN.

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Respiratory viruses are responsible for the majority of acute respiratory tract infections (ARI) in the newborn (NB). Recent evidence suggests a strong association between ARI and other pulmonary diseases and with incrased morbidity and mortality. The present study was designed to establish the relationship between respiratory viruses (Adenovirus - AV vs Respiratory Syncytial Virus - RSV) and severity of neonatal respiratory infectious disease. All NB with ARI and positive viral exam (AV and/or RSV) admitted to the Intensive Care Unit from 5/92 trhough 7/93 were prospectively studied. Viral antigens were detected by indirect Immunofluorescence. Serotype were determined by neutralization. Data were analyzed using relative frequencies. Odds Ratios was established using Cornfield's method.

	N	RNT	RNPT	AGE (X)	FiO2>40%	Days IMV (X)
AV	21	12	9	42	90%	23
RSV	6	5	1	24	50%	7

None of the patients with RSV required a FiO2 >80%. Six NB with AV but none of the NB with RSV required more than 10 days in IMV. OR for IMV requirements was 4-fold greater for NB with AV compared to all other causes of ARI. These data show that NB with ARI due to AV had greater morbidity and higher risk for IMV. We conclude that in our population, ARI due to AV has greater severity when compared to other causes of respiratory infections.