PO 40

CONSEQUENCES OF ORAL BREATHING IN OBESE AND HEALTHY TEEN-AGERS

Gião PHA; Moreira VP; Fisberg M; Pontes AR; Cintra IP. UNIFESP, São Paulo, Brazil

Introduction: The oral breathing is a disturb of high prevalence and that modify directly the structures of the estomatognathic system, damage alterations in the faces' structure, influencing in the functions of chewing and swallowing, and being able to cause obesity or low weight . **Objective**: To study the prevalence of oral breathing in obese and healhty teenagers and compare the phonoaudiologic alterations in these groups. **Methods**: Fifty teenagers (males and females) were evaluated, 30 obeses and 20 healthy. All the patients, had been trough odontologic care and phonoaudiologic interview, to find any possible interference in the results. After that, they had been evaluated for facial, swallowing and chewing functions . This procedure was taped for further analysis. **Results**: We found alterations in tonus and mobility of: tongue in oral breathers (OB) obeses (48%), cheeks in nasal breather (NB) obeses (89%) and lips in OB healthy (89%). The higher alteration of the swallowing was found in obese OB (81%) and of chewing in healthy OB (78%). **Conclusion**: The healthy nasal breathers have the lower indices of alterations in the speech organs and in the oral functions. The oral breathing was associated to swallowing' alteration in obeses and in the chewing process in the healthy group. We found the higher rates of alterations in the speech organs in obeses, independently of the oral or nasal breathing. Since the importance of these functions for the maintenance of muscle's tonus and for one adequate mechanics of food ingestion, the inquiries and research become pertinent for the area. In clinics, the facial miotherapy, involves aspects that if they are not integrated, may become a mistake.

P060

MEASURING THE AGREEMENT BETWEEN TWO METHODS TO ASSESS GESTATIONAL AGE

Grandi C. Epidemiología Perinatal y Bioestadística, Maternidad Sardá, Buenos Aires, Argentina.

Introduction: In clinical practice, a new method for gestational age assessment often can only be evaluated by comparing it with other established techniques ("gold standard"). **Objective**: To describe, through graphical techniques and simple statistical calculations, a way of evaluating the appearance between two methods for the clinical assessment of gestational age, and thereby to determine if they are exchangeable. Material and methods: This is an observational cohort study. Between 2000 and 2001, 137 women with pregnancies of less than 16 gestational weeks were prospectively enrolled at Maternidad Sardá of Buenos Aires. The last normal menstrual period (LNMP) and ultrasound scan (US) measurements were used to the estimate of the gestational age. Mean difference (d : FUM $-$ US), standard deviation (sd), 95% confidence interval and average value between both methods were calculated for each case and plotted ("95% limits of agreement" [d + 2 sd]). **Results**: Mean gestational age at first ultrasound scan was 19.6 + 4.9 (95% CI 18.7 $-$ 20.4) weeks. Concordance between both methods increased by 71.5% (63 - 78) at +/- 10 days to 82.5% (95% CI 75 - 87) at +/- 2 weeks. The mean difference was 0.35 + 1.89 (95% CI 0.03 $-$ 0.67) weeks and the 95% limits of agreement showed that, regardless of the gestational age, the differences reached 7.5 weeks. **Conclusions**: The estimate of gestational age by the last normal menstrual period was higher than that by ultrasound scan in 25% of the cases and lower in 20%, suggesting that in the clinical practice these methods are not exchangeable.

P045

HEME-FE UPTAKE INVOLVES THE PARTICIPATION OF HEME OXYGEN-ASE AND MICROFILAMENTS ASSOCIATED TO THE APICAL MEMBRANE

Arredondo M, Flores S, Mendiburo MJ, Pizarro F. Micronutrient Laboratory, Nutrition Institute and Food Technology, University of Chile, Santiago, Chile.

Introduction: Heme Fe is the main source of Fe in developed countries, because it has a better absorption than inorganic Fe. In the cell, heme-Fe is degraded to free Fe, Co and biliverdin for the microsomal enzyme heme oxygenase (HO). The role of HO1 in the intracellular Fe metabolism and heme-Fe uptake mechanisms by the cell it is unknown. **Objective**: To study the intracellular distribution of HO1 and its relationship with the heme-Fe uptake mechanisms in the enterocyte. **Methods**: Caco-2 cells were incubated with heme-Fe55 in the presence of inhibitors of endocytosis and intracellular traffic. HO1 intracellular localization was studied by membrane biotinylation and confocal microscopy. **Results**: HO1 is localized mainly in the apical membrane of the enterocyte and co-localized with the glucose transporter Glut1. However, a small fraction is localized in the basolateral membrane and co-localized with the transferrin receptor. Heme-Fe uptake increased en the presence of cytochalasin D, metil-β-cyclodextrine, nocodazole and phenylarsine oxide. **Conclusions**: Heme-Fe uptake process involved the participation of active HO1 in the apical membrane and proteins and microfilaments associated to the plasma membrane.

P065

ETHANOL CONSUMPTION DURING PREGNANCY: ITS RELATIONSHIP WITH THE APPEARANCE OF NEONATAL DYSMORPHIES AND THE CONTRACTILITY OF HUMAN UMBILICAL ARTERY

Morales S, Iveli F, Savietto V, Cecotti N, Rebolledo A, Milesi V. Cátedra de Fisiología, Fac. de Ciencias Exactas, Universidad Nacional de La Plata. #Instituto de Desarrollo e Investigaciones Pediatricas (IDIP), Hospital de Niños Sor María Ludovica de La Plata, Argentina.

Introduction: maternal consumption of ethanol is one of the risk factors present during pregnancy. Complete dysmorphic manifestations and fetal alcohol syndrome only appear if maternal ethanol consumption is high. More often, the child suffers a partial presentation of this syndrome. Our **objective** was to explore the existence of associations between maternal ethanol consumption and the appearance of congenital defects and/or dysmorphies in neonates, studying as well the contractile properties of their umbilical arteries (UA), which have a prominent role in the regulation of fetoplacental blood flow. **Methods**: two experimental groups were used: mothers who declared ethanol consumption during any period of the pregnancy or during the three previous months (exposed, E, n=46) and non exposed mothers (NE, n=48). Women who smoked or had any associated pathology were excluded. A thorough physical examination of the neonates was conducted, and their umbilical cords were obtained in order to analyze the contractility of the UA. **Results**: 61% of the neonates from group E presented minor dysmorphies, while only 16% of the NE presented them. Compared to the NE group, the UA from the E group developed significantly lower contractions (gram force/gram weight) when exposed to 1 YM serotonin (58.0 $\pm$ 7.5 gF/gW, n=12 vs 87.6 $\pm$ 8.8 gF/gW, n=14) or to a high K+ depolarizing solution (50.5 $\pm$ 7.6 gF/gW, n=10 vs. 94.21 $\pm$ 16.3 gF/gW, n= 10 p<0.05). **Conclusions**: we observed a significant association between maternal ethanol consumption and the appearance of minor dysmorphies in neonates, as well as contractile alterations in their umbilical arteries.

PO55

EVALUATION OF SWALLOWING IN CHILDREN WITH GASTROESOPHA-GEAL REFLUX

Duca AP; Oliveira Dantas R; Contini Rodrigues AA; Sawamura R. Faculty of Medicine, Ribeirão Preto, University of São Paulo.

Introduction: Gastroesophageal reflux (GER) is considered to be a cause of infant feeding disorder. Negative experience such as vomiting, regurgitation, dysphagia and painful swallowing may cause aversion or feed refusal, with impairment of the swallowing and feeding processes. Aim: To evaluate the swallowing in children with GER diagnosis. **Method**: We studied 37 children with GER, mean age 15.4 months and 15 healthy children (HC), mean age 20.5 months. In the videofluoroscopy evaluation a free volume of liquid and 5 ml of paste, mixed with barium were used. **Results**: Children with GER have more laryngeal penetration (GER 61.8% and HC 33.3% p=0.07) and have more backward compensatory movements of the head (GER 64.7% and HC 0% p<0.01) during liquid swallowing. There was no difference between the groups for the swallowing dynamic time (p>0.05). **Conclusion**: This study shows that children with GER may present difficulties in feeding although no alteration in the oropharyngeal dynamics timing of swallowing, was found.

P071

LINEAR GROWTH ASSESSMENT BY KNEEMOMETRY IN VERY LOW BIRTH WEIGHT INFANTS (VLBWI). CATCH-UP AND GROWTH PATTERNS

Márquez Bravo M, Fustiñana C. Departamento de Pediatría. División Neonatología. ICBME -Hospital Italiano de Buenos Aires. Argentina.

Backgorund: Kneemometry allows the acurate evaluation of short term changes in infant growth. Catch-up growth is a critical event during hospitalization in VLBWI. Normal growth responds to a saltation/stasis pattern which has not been studied yet during catch-up growth in VLBWI. **Objective**. In a cohort of VLBWI by serial kneemometry, assess if there is a saltation/stasis pattern during catch-up growth and relate it to Neonatal Intensive Care practices. **Methods**: A neonates with birth weight <1500 g and gestational age < 31 weeks, were included. The infants were enroled from the 2nd day of life up to discharge. Patients with mayor malformations were excluded. Infants who died before the 1st week of life were not included in the analisis. A hand-held electronic Kneemometer, resembling a Vernier caliper developed to improve the accuracy to measure the knee-heel length in VLBWI, was used. The result of a measurement is the average of five sequential readings. One observer performed the measurements every three days. The error of one sequential reading was 0.17 with a variation coefficient of 0.28% (includes the technical error and an error of the lectures). To analyse the saltation and stasis data we weighted the residuals for the identification of saltation phenomena and not the error in measurements. The numeric data was analized by ANOVA and we performed a multivariate analysis for categorical data. **Results**: 15 VLBWI were included. BW (X $\pm$ SD) 1062 $\pm$ 310 g and 28 $\pm$ 2,5 weeks of gestation. The median of age to start enteral feeding was 4 d, total parenteral nutrition duration: 8 d; mechanical ventilation,12 d; oxygen supply: 20 d, and time with energy intake < 60 kcal/kg : 5 d; 1535 measures were performed, growth velocity was 0.39 $\pm$ 0.069 mm/day. All patientes showed an increase of knee-heel length. Saltatory pattern was observed in 12 infants during the study; 3 patients showed prolonged stasis periods during low energy intake. The multivariate analysis determined an association between stasis and energy intake <60 kcal/kg (p<0,01). **Conclusions**: During catch-up period the growth pattern in very low birth weight infants is mostly saltatory and low energy intake is associated with stasis periods.