vated folate concentrations) toward a profile observed in cobalamin-replete older children and adults. Thus, high MMA and tHcy levels, reported for a large fraction of infants, do not reflect immature metabolism but, rather, insufficient cobalamin to fully sustain cobalamin-dependent reactions. Clinicians and researchers should address the possible developmental and clinical consequences of metabolic evidence of cobalamin deficiency in infants.

CENTRAL OBESITY IS THE MAJOR RISK FACTOR FOR FAILURE OF OBESITY MANAGEMENT DURING CONSOLIDATION PHASE IN CHILDREN

Submitted by Adel El Tajuri
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INTRODUCTION: A proportion of obese children who are treated with a multidisciplinary approach with behavior modification and parental involvement show no response to the consolidation phase of treatment.
OBJECTIVE: Our goal was to identify possible risk factors that led to failure of obesity management in children who were attending an equipped, busy, specialized outpatient clinic.
METHODS: We performed a case-control study in which cases were those whose conditions failed to respond to current multidisciplinary management as judged by no decrease in BMI *z* score. Controls were those who responded to treatment (lower subsequent BMI *z* scores).
RESULTS: Of the 519 children, 416 (80.2%) had BMI *z* scores of >3. Management was successful in 85% of the patients. In bivariate analysis, risk factors were age of <4 years (odds ratio [OR]: 4.00 [95% confidence interval (CI): 1.08–14.70]), previous obesity management (OR: 2.18 [95% CI: 1.10–4.32]), triglyceridemia (OR: 2.01 [95% CI: 1.10–3.65]), and higher abdominal fat content as measured directly by dual-energy radiograph absorptiometry (OR: 1.09 [95% CI: 1.00–1.19]) or relative to thigh (waist/hip index) (OR: 2.67 [95% CI: 1.13–6.72]). Duration of obesity, the initial BMI *z* score, and gender were not predictive of treatment failure. In multivariate analysis, central obesity was the single-most important factor. In more hierarchical conceptual framework, factors retained were maternal obesity (OR: 2.44 [95% CI: 1.22–4.86]), previous management of obesity (OR: 2.21 [95% CI: 1.11–4.37]), and waist/hip index (OR: 3.35 [95% CI: 1.18–9.49]).
CONCLUSIONS: We propose a model in which centrally obese children with obese mothers who have high triglyceride levels are more likely to show resistance to reversal of the pathologic process of excess fat accumulation. Central obesity is a well known correlate of increased morbidity.

NUTRITIONAL STATUS IN CYSTIC FIBROSIS

Submitted by Maria Fotoulaki
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OBJECTIVE: We aimed to investigate the nutritional status of patients with cystic fibrosis (CF) in relation to their clinical manifestations.
METHODS: In 68 patients with CF (aged 2–38 years), body weight, height, and composition (bioelectrical impedance analysis), respiratory function, *Pseudomonas* colonization, pancreatic function, CF-related diabetes mellitus (CF-DM), and genotype were measured.
RESULTS: BMI was <5th percentile in 12 patients (18%), between the 5th and 10th percentiles in 6 (7%), between the 10th and 85th percentiles in 41 (60%), between the 85th and 95th percentiles (overweight) in 4 (6%), and >95th percentile (obese) in 5 (7%). Among 18 patients with a BMI at <10th percentile, 18 (100%) had pancreatic insufficiency, 16 (89%) had *Pseudomonas*, and 7 (38%) had CF-DM. Among 41 patients with a BMI in the 10th to 85th percentile, 37 (90%) had pancreatic insufficiency, 28 (82%) had *Pseudomonas*, and 9 (22%) had CF-DM. Among 9 patients with a BMI at >85th percentile, 3 (33%) had pancreatic insufficiency, 1 (11%) had *Pseudomonas*, and none had CF-DM. Forced expiratory volume in 1 second was significantly better among overweight patients than among patients with a low or normal BMI ($P < .05$). In addition, forced expiratory volume in 1 second correlated with BMI ($P = .014$), age ($P = .029$), and percent free fat mass ($P = .039$). Overweight/obese patients were homozygotes for mild mutations.
CONCLUSIONS: Most patients with CF had an optimal nutritional status. A small percentage were overweight or obese, especially those with pancreatic sufficiency and carriers of mild mutations. These patients had mild-to-moderate lung disease and were less likely to be colonized with *Pseudomonas* or have liver disease.

TRANSMISSION OF *HELICOBACTER PYLORI* INFECTION IN MOTHER-INFANT PAIRS

Submitted by Selda Fatma Hizel Bulbul
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INTRODUCTION: Various pathways, such as person-person, fecal-oral, and oral-oral transmission, play a role in transmission of *Helicobacter pylori* infection. It can be transferred from mother to infant in either the perinatal or postnatal periods.
OBJECTIVE: The aim of this prospective study was to determine the course of *H pylori* infection in mother-infant pairs in early years of life.
METHODS: Forty-eight mother-child pairs were followed for 12 months. *H pylori* and hepatitis A virus immunoglobulin G levels were measured in maternal sera, infant sera, and breast-milk samples at birth and in breast-milk samples and infant sera at follow-up visits.
RESULTS: At birth, the seropositivity for *H pylori* was 81.25% and hepatitis A was 68.75% in breast milk and 95.8% in maternal and infant sera for both microorganisms. Although there was a decrease in seropositivities for both agents in both infant sera and breast milk at the age of 9 months, an increase was observed in the twelfth month.
CONCLUSIONS: High seroprevalence rates of *H pylori* and hepatitis A virus and similar monthly changes in seroprevalence could be indicators of the same transmission routes.

IMPACT OF ZINC SUPPLEMENTATION ON GROWTH: A DOUBLE-BLIND, RANDOMIZED TRIAL AMONG URBAN IRANIAN SCHOOLCHILDREN

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INTRODUCTION: The first study that linked zinc and growth was carried out in Iran and Egypt almost 3 decades ago. At the time, the circumstances leading to growth impairment secondary to zinc deficiency were believed to be unique in less developed countries. Multiple studies have been carried out to assess the effect of zinc supplementation on children's growth. The results of these studies have been inconsistent.
OBJECTIVE: The aim of this study was to investigate the impact of zinc supplementation on growth (weight and height) among schoolchildren who were underweight or had stunted growth.
METHODS: Our study was a randomized, double-blind, placebo-controlled trial of 90 Iranian urban schoolchildren (50 boys and 40 girls; 7–12 years old) who were underweight or stunted and were supplemented with 10 mg of zinc or placebo on school days for 6 months. Variables were weight and height.
RESULTS: Significant effects on weight gain (2.037 ± 1.240 vs 1.55 ± 0.64 kg; $P = .0167$) and height (2.030 ± 1.003 vs 1.403 ± 0.521 cm; $P = .0002$) in the children after zinc supplementation versus placebo administration, respectively, were seen over the 6-month period.
CONCLUSIONS: On the basis of this study, zinc supplementation improved growth in underweight or stunted children and should be considered for populations at risk for zinc deficiency, especially where there are elevated rates of underweight or stunting.

TEL/AML1$^+$ ACUTE LYMPHOBLASTIC LEUKEMIA IN THE GREEK PEDIATRIC POPULATION

Submitted by Sophia Polychronopoulou
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INTRODUCTION: *TEL/AML1*$^+$ acute lymphoblastic leukemia (ALL) is considered to be a distinct nosological entity with excellent prognosis, but recent studies have indicated significant clinical heterogeneity.
OBJECTIVE: In this study, we attempted to estimate the incidence and clinical features of *TEL/AML1*$^+$ ALL for the first time in a representative cohort of Greek pediatric patients.
METHODS: One hundred twenty children (<16 years old) diagnosed with ALL (107 of B-cell origin, 13 of T-cell origin) were screened for *TEL/AML1* with interphase fluorescence in situ hybridization by using a commercial probe set. All patients were treated as either standard risk (SR) or high-risk (HR) cases according to a modified BFM-95 (Berlin-Frenkfurt-Munster) protocol. Follow-up ranged between 5 and 87 months (median: 45 months).
RESULTS: Twenty-six patient (all of them will ALL of B-cell origin [24.3%]) were found to be positive for *TEL/AML1*. The presence of *TEL/AML1* was significantly associated with younger age and lower white blood cell count at diagnosis but not with remission duration or overall survival rate. The number of children who relapsed (1 vs 7) or succumbed (1 vs 5) was comparable between the *TEL/AML1*$^+$ and *TEL/AML1*$^-$ groups of children with ALL of B-cell origin.
CONCLUSIONS: The incidence of *TEL/AML1* in Greece seems comparable to that in other European and Med-

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