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MANAGEMENT OF SEVERE HYPERBILIRUBINEMIA (HBI) IN FULLTERM NEWBORNS. A CONTROLLED TRIAL OF 4 INTERVENTION.

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When a decision is made to treat HBI in a breast fed infant,there are a number of options available but they have never been compared. We enrolled fullterm,healthy breast feed newborn infants when their serum bilirubin(BI)levels reached 17mg/dl and assigned them ramdomly to one of four interventions.1)Discontinue breast feeding(DBF),2)phototherapy and DBF,3)photoptherapy,continue BF,4)observe.There were no differences between the groups in the sex ratio,delivery mode, birth weight or gestation.Mean serum BI levels declined in all groups by 48 hours but in the first 24 hours the decline was significantly greater in groups 2 and 3 ($p<.05$ versus group 4).

Intervention	1	2	3	4	
n	26	38	30	25	
BI>=20mg/dl	5(18%)	1(3%)*	5(14%)	6(24%)	
Time to BI					*p<0.05 vs
<13.5mg/dl hrs.	101±67	71±29	83±42	120±62	group 4
Δ BI at 24 hrs.	-0.8±2.2	-1.7±2.2*	-1.8±4.2*	-0.4±2.04	
Δ BI at 48 hrs.	-3.6±4.8	-4.5±2.5	-3.8±2.0	-4.5±6.8	

Although intervention 2 was most effective,serum BI did not reach 20mg/dl in 76% of infants in group 4.Even if"vigintiphobia"determines our actions,any of these interventions is an acceptable initial approach to the fullterm breast fed infant with significant HBI. These data can be presented to parents who can then make an informed decision regarding which intervention they prefer.

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BONE AGE (BA) AS PERFORMED BY THE TANNER-WHITEHOUSE (TW) METHOD. IIL RELIABILITY OF THE 5B-TECHNIQUE.

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In the II Latin American Symposium on Pediatric Endocrinology (Buenos Aires, 1986) a short-cut method -the 5B technique- for radiographic BA estimation was discussed. Five hand-wrist bones were chosen:the epiphyseal proximal phalange of the fifth finger (5), the great bone (G), the trapezius bone (T), the distal epiphysis of the radius (R), and the distal epiphysis of the ulna (U). Scores were calculated as follows: P (t)=P (R)+P (U)+llP(5)+4P (G) +3P (T);were P(t) was the total score and P the scores for each bone. In the present study,5B was compared against TWl,TW2,RUS and CAR methods by analysis of variance and Tukey test for unequal sample sizes. Non significant differences were obtained when 5B-mean bone ages were compared against those from TWl and TW2 methods. 5B-means gave, however, highly significant differences when compared against those from the RUS and CAR methods. It was concluded that: (a)BA estimation by the 5B-technique is as reliable as -and easier to do than- those from both TW variants; (b)RUS and CAR methods estimate BA differently than 5B and TW ones.

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INSULIN-LIKE GROWTH FACTORS (IGF) AND THEIR BINDING PROTEINS IN CORD SERA OF CHILEAN NEWBORNS: RELATIONSHIP TO FETAL AND PLACENTAL GROWTH.

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28 term newborns (GA 38-42 weeks) were studied. 9 were small for gestational age (SGA), 6 were large and the rest were appropriate. There was no correlation of IGFs or IGFBPs with gestational age. The relationship with birth weight (BW),placental weight (PW) and ponderal index (PI) were analyzed by linear regression. In the table

	IGF-1	IGF-II	IGFBP-	IGFBP-2	IGFBP-3
BW	0.66*	-0.16	-0.35	-0.50	0.71*
PW	0.59*	-0.17	-0.35	-0.18	0.57*
PI	0.52*	-0.80	-.037**	-0.52**	0.78*

* $p<0.001$ **$p<0.05$

These findings support the hypothesis that IGFs and IGFBPs are involved in fetal and placental growth, and suggest that IGF-I and IGFBP-3 are regulated in a coordinated manner during the third trimester of pregnancy and divergent roles for the IGFBPs during fetal adaptation to intrauterine growth restriction.

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TYROSINEMIA TYPE I. RESOLUTION OF THE METABOLIC ABNORMALITIES AND INCREASED GROWTH FOLLOWING LIVER TRANSPLANTATION.

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Type I tyrosinemia is a lack of fumarylacetoacetate hydrolyase (FAA), with accumulation of abnormal metabolites of tyrosine that are toxic to both,liver and kidney. Diagnosis of tyrosinemia was achieved in a 5.0 year old boy by the finding of high serum tyrosine level (337 umol/L) and low lymphocyte FAA activity. He showed liver cirrhosis, renal tubular dysfunction and hypophosphatemic rickets. He began a low tyrosine and phenylalanine diet, high oral phosphate doses and 1,25 -dihydroxyvitamin D3. At 12.6 years his height was -0.4 DS and growth velocity was 3.5 cm/year; hepatic ultrasound showed a nodule of 3.5 cm, and a-fetoprotein raised (900 ng/ml). He underwent total hepatectomy and liver transplantation (Tx); biopsy of the liver nodule confirmed hepatoma. Post Tx, renal tubular dysfunction improved and serum phosphate and tyrosine levels normalized (48 umol/L). At 14.6 years, he had height -3.9 DS, growth velocity 8.4 cm/year, bone age 11 years genital stage IV and serum testosterone 310 ng/dl; he began on LH-RH analog therapy. LHRH analog therapy was began in order to increase final adult height.

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OSTEOGENESIS IMPERFECTA (OI): PRELIMINARY RESULTS OF TREATMENT WITH PAMIDRONATO (APD).

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Five children (4 boys) with OI, mean (±SD) age 8.6±4.3 years were treated with APD 4.2±1.8mg/kg/day and calcium 800±600 mg/day. All 5 completed 6 months of treatment and 3 reached 1 year of APD therapy. Serum levels of calcium, phosphate, alkaline phosphatase, PTH, as well as the urinary excretion of hydroxyproline, were normal both, before and during treatment. One patient had hypercalciuria before the beginning of APD therapy and another after 6 months of treatment. All showed an increase of the lumbar spine bone mineral density (DEXA, Hologic QDR-1000) with a significant increment in the percentage of variation after 12 months of treatment (OI 27.0 ± 6.0% vs controls 5.9±3.5%, $p<0.01$); radiographic examination showed a parallel improvement. This preliminary study suggests that APD improves the bone mineralization and may consequently decrease bone fractures.

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IDENTIFICATION OF PROBLEMS OTHER THAN CHIEF COMPLAINT

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In a previous report, we found that residents of the 1st year in general pediatrics had several problems to identify socioeconomical factors, immunizations and nutritional status,during an interview with mothers when this issues were not the chief complaint.We carried out this study in order to clarify whether this holds true for residents in 3rd year of general pediatric training.Member of the hospital staff acted as simulated mothers and were interviewed by 28 1st year residents and 14 3rd year residents. Chief complaint was diarrhea secondary to urinary tract infection associated to malformations.Anemia, hypovitaminosis D and incomplete immunizations were considered secondary issues. Third year residents identified more properly the chief complaint than their 1st year conterpart ($p<0.0001$), whereas there were no statistically significant differences in the identification of secondary issues and planning for their solutions. We emphasize the need of considering a comprehensive vision of the patient and his family in the pediatric curriculum.