

**FCO1****EFFECT OF ENTERAL ADMINISTRATION OF INSULIN ON ESTABLISHMENT FEEDING TOLERANCE IN PRETERM INFANTS**

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**Aim:** To determine the effect of enteral administration of insulin on the establishment of enteral feeding in preterm infants <32 weeks gestation. Insulin is present in maternal milk at levels three to fourfold higher than in maternal blood. Insulin has been shown both in vitro and in vivo to accelerate a number of GI functions.

**Methods:** A prospective, double blind, randomised, placebo controlled study was conducted on 60 preterm infants (<32 weeks gestation, < 1500 g) consecutively admitted to our neonatal intensive care unit. 30 preterm infants were given 0,5U/kg every six hours insulin enterally from 4 to 28 days of age. Feed toleration and time taken to establish full enteral feeding compared between the two groups. Parenteral nutrition was used until the infants achieved complete enteral feeds, and was adjusted to provide a total intake (enteral and parenteral) of 120 kcal/kg/day. Gastric residuals (>50% of a three hour feeding volume) were determined by aspiration of the gastric contents every three hours in all infants. Doppler ultrasound blood flow velocity in the superior mesenteric artery (SMA) was determined before and after feeding. Serum glucose concentrations were measured at 0, 30, and 90 minutes after the first second and fifth doses of insulin.

**Results:** The times taken to establish full enteral feeding were significantly shorter (>30%) in the group receiving enteral insulin than in those receiving the placebo, fewer gastric residuals per infant and significantly increase in Doppler ultrasound blood flow velocity (>15%) in SMA after feeding. No adverse effects, such as hypoglycaemia, were observed after administration insulin.

**Conclusions:** The results suggest that enteral administration of insulin to preterm infants enhances GI function.

**FCO2****EFFECTS OF MATERNAL WEIGHT GAIN DURING PREGNANCY AND PREGESTATIONAL WEIGHT IN AETIOLOGY OF LOW BIRTH WEIGHT**

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**Aim:** The aim of this prospective study was to evaluate maternal weight gain and pregestational weight in aetiology of low birth weight (LBW).

**Material - Method:** 5000 live born babies were evaluated randomly between October 2000 - May 2001 in the Bakırköy Maternity and Child Hospital in İstanbul. LBW was defined as infant weight below 2500 gram and they formed study group. Babies with normal birth weight (NBW) chosen randomly in equal numbers from 5000 live born babies formed control group. Weight gain during pregnancy and pregestational weights of mother in both groups were recorded after an interview with mothers. To evaluate the maternal stature, body mass index (BMI), which was the division of weight by square of height ( $\text{kg}/\text{m}^2$ ), was calculated for each mother.

**Results:** The rate of mother with a pregestational weight <50kg was 16.6% in LBW group and 8.3% in NBW group. In LBW and NBW groups, rates of mothers with a BMI less than 18.5  $\text{kg}/\text{m}^2$  were 10.5% and 5.7%, respectively. In LBW group, 27.8% of mothers had gained <10kg during pregnancy but this rate was 15.6% in NBW group.

**Conclusion:** These findings showed that, low pregestational weight, low BMI and low maternal weight gain during pregnancy have very significant effects on birth weight of infant.

## FCO3

**NEONATAL SEPSIS CAUSED BY ENTEROBACTER AMNIGENUS**

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Isolation of *Enterobacter amnigenus* from a human source is extremely rare. We report for the first time in literature the isolation of *Enterobacter amnigenus* from the blood of 5 premature infants. Characteristics of the patients are presented in the table. First 4 patients were parts of quintuplets pregnancy, the fifth sibling was not symptomatic and her cultures were negative. All the infants had signs and symptoms of sepsis, which prompted comprehensive investigations and treatment with antibiotics and supportive measures, one of the quintuplets was asymptomatic. All had umbilical catheters and were on mechanical ventilation. *Enterobacter amnigenus* was isolated from both the aerobic and anaerobic blood culture bottles in 8 occasions. Repeated blood culture from three patients grew again *Enterobacter amnigenus* while they were on antibiotics. Cultures from other sites including urine, cerebrospinal fluid, stool and endotracheal tube were negative in all patients.

Patient	Gestation (w)	B.W. (Gm)	Age (day)	Symptoms	Antibiotics*	Blood transfusion
1	28	1000	11	yes	2, 3	yes
2	28	1100	9	yes	2, 3	no
			16	yes	2, 4	
3	28	1020	9	yes	2, 3	yes
4	28	1040	14	yes	2, 3	yes
			19	yes	2, 4	
5	29	880	47	yes	1	no
			49	yes	1, 2	

\* Ampicillin (1), Amikacin (2), Cefotaxime (3), Imipenem (4).

After the cultures were taken, the patients were initially given cefotaxime and amikacin intravenously (n=4), and 1 patient ampicillin and amikacin. Three patients continued to be symptomatic and repeated blood cultures grew *Enterobacter amnigenus* again. Imipenem was given instead of cefotaxime (n=2) and repeated blood cultures were negative. MICs studies were performed on the isolates. All patients survived. In spite of extensive epidemiological investigations we could not identify the initial source of infection except that three of the patients had been transfused with packed RBCs taken from one blood bag. A sample of that blood was not available for culture. We conclude that *Enterobacter amnigenus* can cause neonatal sepsis, and aggressive treatment with the appropriate antibiotics and supportive measures are required.

## FCO4

**HIGH INCIDENCE OF LONG BONES DYSPLASIA IN NEWBORN INFANTS IN QATAR**

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**Background and Objectives:** Dysplastic/ absent long bones (DALB) is a rare congenital anomaly. Absent radius and ulna incidence has been reported as 1/50,000 to 1/100,000 newborns. Several infants had been admitted to our newborn services in the last several years. We wanted to define the epidemiological characteristics of the newborns and their mothers with congenital missing long bones.

**Setting:** Women's Hospital, Doha, Qatar. The only women's hospital in Qatar where about 98% of all pregnancies are delivered.

**Methods:** We reviewed the records of birth and the Neonatal Intensive and Intermediate Care Units admission books in the last 6 years, 1988-1994 for infants who had documented DALB.

**Results :** Total number of live born infants in the study period was about 90,000 infants. We were able