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THE ROLE OF PRENATAL INTERVENTION IN OBSTRUCTIVE UROPATHIES

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Objective: To determine the benefits and risks of prenatal intervention in obstructive uropathies.
Methods: Seven fetuses who underwent 10 prenatal interventions because of a fetal obstructive uropathies between September 2000 and July 2002 were prospectively reviewed. In addition, 7 fetal anomaly cases who followed with no prenatal intervention were reviewed as a control group. The antenatal diagnosis of fetal anomalies was made using prenatal standard ultrasound and diuretic Doppler ultrasound.
Results: Of the 7 fetuses underwent prenatal intervention, 6 had grade 4 UPJ-type obstruction of pelvic diameter greater than 35 mm and one had PUV. Serial renal pelvic needling on 6 fetuses with UPJ-type obstruction and serial vesical needling on fetus with PUV were performed. Urinary system filled up in following day after serial needlings in all fetuses. None of these severe obstructive uropathies resolved/regressed either spontaneously or by needling. Pelviamniotic shunt was placed into three kidneys (one bilateral) with grade 4 UPJ-type obstructions of pelvic diameter greater than 35 mm. Six out of 7 fetuses who underwent prenatal intervention were delivered healthy at term by normal vaginal delivery. All of these patients underwent successful surgery postnatally. The fetus with PUV was terminated with the request of the family before 20 weeks' gestation.
Of the control fetuses, 4 had grade 4 UPJ-type obstruction, one PUV, one ureterocele, and one had complete prepucial obstruction. Of these 7 control fetuses, 6 was delivered healthy at term by normal vaginal delivery, while one was terminated with the request of the family before 20 weeks' gestation. After delivery, although all of these 6 neonates underwent successful surgery early postnatally, three had differential renal function (GFR) less than 15 at the diseased kidney.
Conclusions: If not treated timely and properly, irreversible renal damage may develop in fetuses with severe obstructive uropathies. Prenatal needling seems not sufficient and may not be beneficial in such cases. Prompt prenatal shunting may beneficial in fetuses with severe anatomic urinary obstruction. It may improve postnatal outcome of such cases by preventing irreversible damage prenatally. Such an approach, with experience, seems safe, minimally invasive and beneficial in preserving the growing kidneys in selected cases.

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CONGENITAL CYTOMEGALOVIRUS INFECTION: HEMATOLOGICAL EVOLUTION IN NEWBORN INFANTS TREATED WITH GANCICLOVIR

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Objective: To verify the hematological evolution of newborns with congenital cytomegalovirus infection treated with Ganciclovir and two type of regimens. Methods: From January 1998 to December 2000, we studied 24 neonates with symptomatic congenital cytomegalovirus infection (CMV) that were admitted to the Neonatal Intensive Care Unit (NICU). The newborns were classified into two groups: 14 neonates were given an initial treatment course of 7.5 mg/Kg twice daily for three weeks, then a maintenance course of 10 mg/Kg three times a week for 3 months (Nigro 1994) (group A) and 10 neonates received 7.5 mg/Kg twice daily for three weeks (group B). Criteria for eligibility were: signs and symptoms compatible with a congenital infection from whom a specimen of urine and blood could be taken in the first 21 days of life. Results: In group A the CMV cultures and CMV DNA of specimens from eleven infants (80%) became sterile. In group B, five infants (50%) had negative CMV culture and CMV DNA results. The clinical features in group A included hepatomegaly (92.8%), splenomegaly (64.2%), anemia (57.1%), jaundice (55%) and petachial rash (55%). Hematological results are shown below: table 1 and table 2.

Table 1 - Group A median values

Ganciclovir treatment	Before	During	After
Hemoglobin (g%)	12.5	10.7	12.1
Neutrophils (mm3)	4258.5	3378	3215*
Platelets (mm3)	63250	272000	175006

Table 2 - Group B median values

Ganciclovir treatment	Before	During	After
Hemoglobin (g%)	11.4	10.6	10.2
Neutrophils (mm3)	4700	4079	526*
Platelets (mm3)	72750	130233	18006

Conclusions: The authors concluded that the newborn infants that had been treated with Ganciclovir for a period of 3 months (group A) presented hematological evolution better than the group that was treated for a period of three weeks (group B) and the majority of newborn infants from group A showed CMV culture e CMV DNA negative shortly after the treatment. It is safe to assume that patients submitted to a prolonged treatment with Ganciclovir respond far better than the ones treated over a shurter period.

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INCIDENCE OF RESPIRATORY VIRUSES IN PRETERM INFANTS SUBMITTED TO MECHANICAL VENTILATION

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Objectives: 1.To verify the incidence of infection by respiratory viruses in preterm infants submitted to mechanical ventilation. 2.To evaluate the clinical, laboratorial and radiological patterns of viral infections among hospitalized children in the Neonatal Intensive Care Unit (NICU) with respiratory failure. Methods: Seventy preterm infants were studied prospectively from November 2000 through July 2002. All neonates had the following protocol investigations: clinical, radiological and laboratorial data, including specific exams for respiratory viral pathogens: indirect immunofluorescence assay (IFA) with monoclonal antibodies and viral culture from nasopharyngeal aspirates. The presence of respiratory viruses in children's nasopharyngeal was assessed at admission in the NICU and throughout the mechanical ventilation period. Blood culture was used for bacterial investigation. Results: Respiratory viruses were diagnosed in 20 preterm neonates (28.6%) with respiratory failure and that were submitted to mechanical ventilation. The most common admitting diagnose was hyaline membrane disease 18 (90.0%). Respiratory syncytial virus was detected in nine neonates (12.8%), Influenza A virus in eight (11.4%), Respiratory syncytial virus plus Influenza A virus in two (2.8%), and Influenza A virus plus Parainfluenza virus type 3 in one infant (1.4%). Most of the neonates with viral infection had the following characteristics: female 14 (70.0%), with average gestational age of 32.5 weeks (range 27.5-36.5 weeks) and with average birth weight of 1553 g (range 830-3050 g). The average age of hospital admission was 13 days of life (range 1-33 days). The main risk factors were: no breast feeding (p=0.022) and family history of respiratory infection (p=0.046). The most frequent clinical signs were: cyanosis in 17 cases (85.0%); fever in 10 (50.0%); rhinorrhea, wheezing and apnea in eight (40.0%); bradycardia in six (30.0%); and vomiting plus diarrhea in four neonates (20.0%). Eighteen neonates (90.0%) developed pneumonia during hospitalization while six infants (30.0%) presented sepsis. Respiratory viruses were associated to bacteria in six cases (30.0%). An alveolar infiltrate was present in 13 (72.2%), an interstitial infiltrate in five (27.8%) and atelectasis in 11 (61.1%) of the 18 patients with pneumonia. The average duration of mechanical ventilation was 17 days (range 1-96 days). From 20 preterm neonates with viral infection, only one unfortunately died. Conclusions: Although the majority of viral respiratory infections have a benign clinical co-