EARLY DIAGNOSIS AND FOLLOW-UP OF TWIN PREGNANCY USING A TWO-DIMENSIONAL ULTRASONIC SCANNER

U. ABDULLA

Department of Obstetrics and Gynaecology, University of Liverpool, England

A two-dimensional ultrasonic B scanner, the Nuclear Enterprises Diasonograph, is used to diagnose both single and multiple early pregnancy. The contact scanning method is used. The patient is required to have a full bladder if she is under 14 weeks gestation. The uterus and the cervix are outlined. Then a search is made for the gestation sac or sacs within the uterine cavity if the cyesis is under 10 weeks. Serial longitudinal and transverse scans are carried out to outline the gestation sacs. The fetal echoes within the gestation sac are seen and the fetal heart rate can be detected using the time-position display (TP).

The patients that are studied fall into the following groups: (1) patients who are clinically suspected to have multiple pregnancy; (2) patients who have been on ovulation induction therapy; (3) patients with family history of twins; (4) patients with threatened abortion.

The diagnosis of multiple pregnancy during the 11th week is equivocal. After the 12th week gestation, the diagnosis is made by visualising the fetal head and the maturity is then estimated by measuring the biparietal diameter.

Thus fetal growth can be assessed by carrying out serial biparietal diameter estimations.

Dr. U. Abdulla, Department of Obstetrics and Gynaecology, P.O. Box 147, Liverpool L69 3BX, England

RITODRINE HCL FOR THE PREVENTION OF PREMATURE LABOR IN TWIN PREGNANCIES

C.L. CETRULO, R.K. FREEMAN

Department of Obstetrics and Gynecology, University of Southern California, Medical School, Los Angeles, California, USA

The perinatal mortality (PNM) rate for twin gestation is in the range of 15%, and this high perinatal mortality rate is due predominantly to prematurity, although twins may also be born growth retarded. Ritodrine HCl, a beta sympathomimetic drug, has been shown to be effective, both in stopping premature labor and in preventing intrauterine growth retardation. With this in mind, a double-blind study using ritodrine HCl or placebo was begun in order to study its effect on premature labor, intrauterine growth retardation, and the PNM rate in twins.

As soon after 20 weeks as the diagnosis of twins was made, the patient was entered into the study after an initial screening. Patients were then followed closely in the antepartum period with 24-hour urine estriol determinations, biparietal ultrasound measurements and antepartum fetal heart rate and uterine contraction monitoring. Continuous fetal heart rate and uterine contraction monitoring was also done in the intrapartum period. At birth, the infants were evaluated with Apgar scores, cord blood gases, and at 24 hours of age a gestational age estimation using the Dubowitz score. The infants are to be followed closely for five years with developmental tests. Thus far, 30 patients have delivered and have been followed to 6 weeks postpartum. Although the results on individual patients have remained blinded to the investigators, an initial evaluation of the drug (ritodrine) and control (placebo) groups have revealed no difference with respect to gestational age, birth weight, or perinatal mortality. These preliminary results are not significant. However, it appears that ritodrine HCl is a safe oral agent for the antepartum gravida and her fetus. The study will be continued until approximately 100 patients have been enrolled.

Dr. C.L. Cetrulo, Women's Hospital, 1240 North Mission Road, Los Angeles, California 90033, USA

A CASE OF SIMULTANEOUS INTERSTITIAL BILATERAL PREGNANCY

M. PEZZANI

Department of Obstetrics and Gynecology, General Hospital, Ceprano, Frosinone, Italy

Twin pregnancies may present tubal involvement in the following cases: (1) simulta-

neous intra- and extrauterine pregnancy; (2) interstitial bilateral pregnancy (either simultaneous or not); (3) multiple pregnancy in the same tube; and (4) simultaneous interstitial and ovarian pregnancy. Interstitial bilateral pregnancy appears to be by far the rarest kind of tubal twin pregnancy, apparently only one case having been reported in the literature, and this referring to a non simultaneous pregnancy. A case is now reported that therefore appears to represent the first observation of simultaneous interstitial bilateral pregnancy.

Prof. Massimino Pezzani, Via Caragno Vecchia 2, Ceprano, Frosinone, Italy

HYPOTHESIS OF AN OVULAR REGULATION OF PREGNANCY WEIGHT-GAIN

E. PAPIERNIK, L. GERARD, A.M. HULT, L. SCHNEIDER

Department of Obstetrics and Gynecology, Antoine Béclère Hospital, Clamart, France

A retrospective study of 127 twin pregnancies has been carried out, considering the relation between maternal weight-gain and zygosity of the ovum.

(1) At 28 weeks of gestation, the maternal weight-gain distribution goes on according to a bimodal curve, the analysis of which shows that each pike corresponds to one twin-pregnancy variety.

(2) Whatever the considered term might be (28-32-36 weeks), the maternal weight-gain is higher in DZ than in MZ pregnancies, and we have to point out the fact that toxemic pregnancies, in each group, have nothing to do with this difference.

We consider this maternal weight-gain difference as reflecting the known quality difference between MZ and DZ ova. The data lead us to set up the more general, hypothesis, of an ovular regulation factor of the maternal weight-gain, in addition to classic data such as the own fetal weight, its annexes, and maternal diet.

Prof. E. Papiernik-Berkhauer, Service de Gynécologie-Obstétrique, 157 Rue de la Porte de Trivaux, 92140 Clamart, France

PHYSICAL AND INTELLECTUAL EVOLUTION OF MZ COTWINS WITH DISCORDANT BIRTH WEIGHT

B. LE MAREC, M. CHEREL, J. LE FRECHE, J. SENECAL

Department of Pediatrics and Center for Prematures, University Hospital, Rennes, France

Twinning, when MZ twins with discordant weight are involved, constitutes a privileged way for studying delay of growth in uterus, for it may induce a real, almost experimental, intrauterine malnutrition.
A total of 54 MZ twin pairs and 6 sets of triplets have been followed during two years, and the somatic and psychomotor development of these children has been compared.
The study shows a global tendency towards a stabilization of birth differences, which is also found for three common somatic variables, i.e., weight, height, and skull circumference.
Simply considering the quantitative aspect of the evolution of the development quotient, and in spite of the intervention of numerous socioeconomic factors, it may be concluded that the study of psychomotor development shows that the twin with the smallest birth weight is penalized in his further development and may also more easily show physical or psychomotor handicaps.

Prof. B. Le Marec, Service de Pédiatrie et Centre de Prématurés, Centre Hospitalier et Universitaire, Rennes 35000, France

TYPE OF TWINNING IN ITS RELATIONSHIP TO NEUROLOGICAL DEFICITS, COGNITIVE ABILITIES, AND BIRTH WEIGHT

M. NATHAN, E. LWOW, R. GUTTMAN, A. SCHNABL

The School of Education of the Kibbutz Movement-Oranim, Kiriat Tivon, Israel Department of Psychiatry, Emek Israel Medical Center, Afula, Israel

The present study explored the relationships of the following variables as a function of