

RESULTS

Results

These are shown in tables 1 - 11 and figures 1- 13

Tables:

Table 1 : Shows clinical profile of control group, controlled diabetic group and uncontrolled diabetic group. They are matched as regard age, parity, gestational period, blood pressure, and 2h postprandial blood glucose level

Table 2: Shows that 2h postprandial blood glucose level was significantly higher in uncontrolled diabetic group compared to control cases ($P < 0.05$).

Table 3: Shows that NST was reactive in 88% of control cases, 75% of controlled diabetics, and 60% of uncontrolled diabetics.

Table 4: Shows that VAS test was interpreted as abnormal in 30 % of uncontrolled diabetic group and 20% of controlled diabetic group compared to 10% of control group.

Table 5: Shows that VAS test was normal in 90% of control group.

Methods:

All cases were followed up from 32nd weeks gestation and subjected for:

(I) At the first visit:**(A) Full medical history including:**

- Personal history.
- Complaint and present history.
- Past history of diabetes and other medical diseases which can affect pregnancy and labour.
- Family history
- Menstrual history.
- Obstetrical history.

(B) Clinical examination including:

- * General examination
- * Chest examination
- * Heart examination
- * Abdominal examination:
 - Fundal level
 - fundal grip
 - umbilical grip
 - Pelvic grips
 - F.H.S.
 - uterine contractions
 - Abdominal scars

(C) Oral glucose tolerance test (OGTT): It was performed for all cases as following:

- Measurement of fasting blood glucose level.
- Administration of 100_g glucose.
- Measurement of 1-,2-, and 3-hours postprandial blood glucose levels .

* Normal values:

- Fasting 90 mg/100 ml.
- 1 hour 165 mg/100 ml.
- 2 hour 145 mg/ 100 ml .
- 3 hour 125 mg/ 100 ml.

* Blood glucose determination was done by glucose oxidase method

(D) NST | Done at the first visit for all cases in conjunction with OGTT.

(E) Vibroacoustic stimulation test

* Done after 20 minutes from the beginning of NST.

(II) At follow up visits (Twice weekly):

(A) NST

(B) VAS

(C) 2-hours postprandial blood glucose levels were measured (for diabetic groups) at the same setting of NST and VAS testing. 2-hours postprandial blood glucose

level up to 120 mg % was used as a measure of diabetic control (Beard and Moresh, 1989).

*** Technique of NST :**

The test was done by using the electronic fetal monitoring apparatus (Sonicaid FM-7) as follow:

- The pregnant woman lies in semi Fowler position with left lateral displacement of hip joint
- Maternal pulse, Blood pressure and temperature were measured
- The transducer of the fetal heart rate monitor was applied to the most appropriate position for the best reading and after adjustment of the transducer and beginning of recording; fetal movements were recorded by a signal marker given to the mother to press each time she feels a fetal movement
- The test was done with the paper speed of 1 cm/minute for 20 minutes
- The test was repeated on the subsequent day when the results were unsatisfactory.
- NST was interpreted according to Meyer Menk modification of fischer scoring system, P 28.

Technique of vibroacoustic stimulation:

After 20 min. of FHR monitoring, an artificial larynx (Model 5-C, 80Hz., 82Db.) was applied to maternal abdomen near fetal head and stimulation was

done when there is no acceleration. The duration of stimulus was approximately one to three seconds. If no acceleration of FHR of at least 15 bpm starting within 15 seconds reapplication of the stimulus up to three times was done.

- If reactive criteria were met, monitoring was allowed for 15 minutes after stimulation.

- If reactive criteria are not met after 3 times of stimulations, the test was repeated on the same day.

- The test was interpreted as: (Ingemersson et al., 1988).

(1) Normal:

- Type Ia: prolonged period of acceleration >15 bpm
(>3 minutes)

- Type Ib: Two 15 bpm accelerations, each of at least 15 seconds in a 10 minutes interval after stimulation or one acceleration lasting >1 minute.

(2) Abnormal:

- Type II: Biphasic response with acceleration followed by deceleration

- Type III: Prolonged deceleration (>60 bpm and >60 seconds duration) or no response.

Timing of delivery:

All cases were followed up till the last visit before delivery which was determined by:

- Spontaneous onset of labour.
- Completed 40 weeks gestation.
- Repeated non reactive NST and abnormal VAS response.

Cases of postmature and premature deliveries were excluded.

Fetal outcome included fetal mortality and apgar score at 5 minutes.