Figure 3. Comparison of birth weights in neonates born by Normal vaginal delivery , Emergency caesarean section and Elective caesarean section

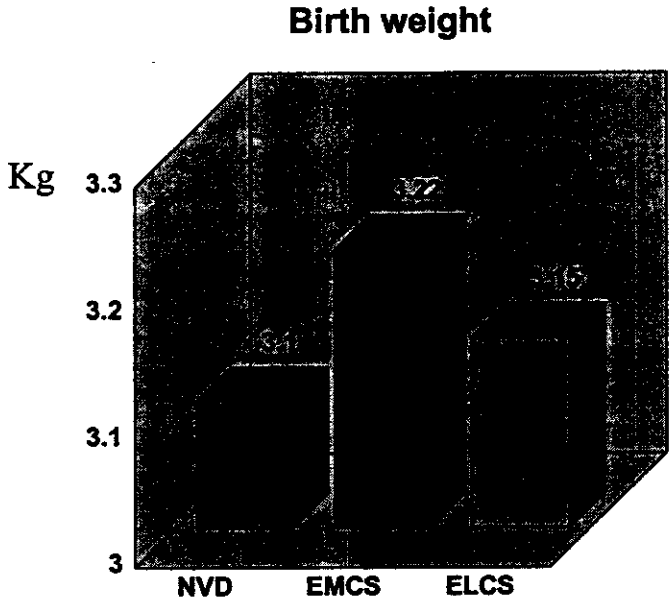

Table 4. Values of Thyroxin, Triiodothyronine, Thyroid stimulating hormone , Glucose and NEFA in neonates born by Normal vaginal delivery, Emergency cesarean section and Elective caesarean section.

	NVD *n*=20 *mean (± SD)*	EMCS *n*= 20 *mean (± SD)*	ELCS *n*= 20 *mean (± SD)*
T4(ug/dl)	6.99 (±1.7)	10.25 (±0.6)	12.94 (±0.9)
T3(ng/ml)	0.6 (±0.06)	0.74 (±0.04)	0.9 (±0.05)
TSH(IU/ml)	2.89 (±0.6)	3.83 (± 0.5)	6.46 (±0.7)
Glu. (mg/dl)	51.9 (±9.2)	51.9 (± 9.1)	52.55 (±8.7)
NEFA(mMOL/L.)	0.66 (±0.06)	0.65 (± 0.02)	0.62 (±0.02)

T4 = Thyroxin.
T3 = Triiodothyronine.
TSH = Thyroid stimulating hormone.
NEFA = non esterified fatty acids.
NVD= Normal vaginal delivery.
EMCS = Emergency caesarean section.
ELCS = Elective caesarean section.

Figure 4. Comparison in levels of Thyroxin in neonates born by Normal vaginal delivery , Emergency caesarean section and Elective caesarean section

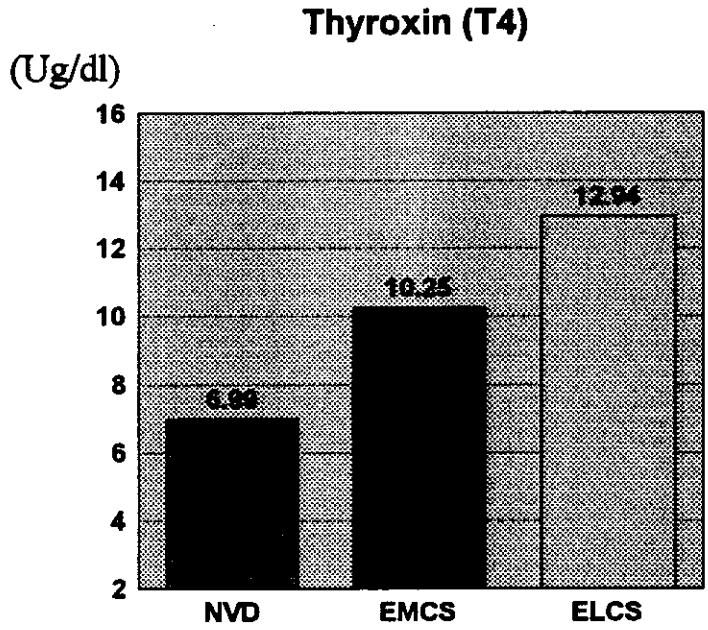

Figure 5. Comparison in levels of Triiodothyronine in neonates born by Normal vaginal delivery , Emergency caesarean section and Elective caesarean section

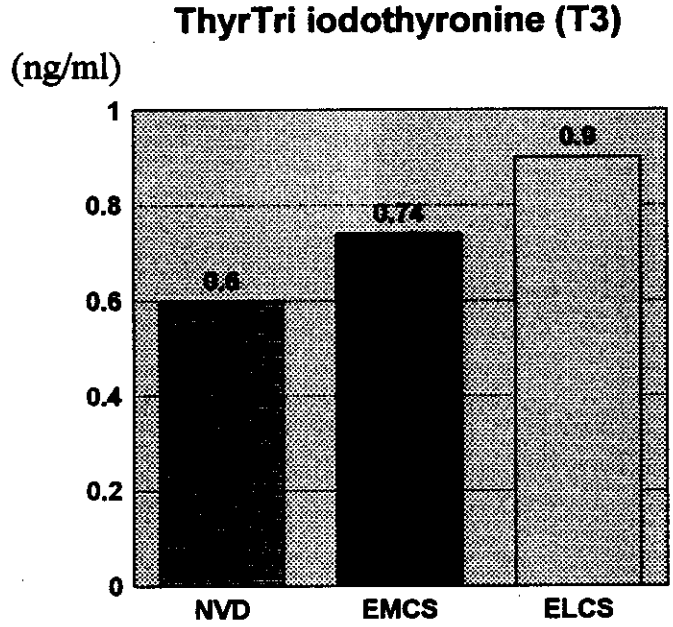

Figure 6. Comparison in levels of Thyroid stimulating hormone in neonates born by Normal vaginal delivery , Emergency caesarean section and Elective caesarean section

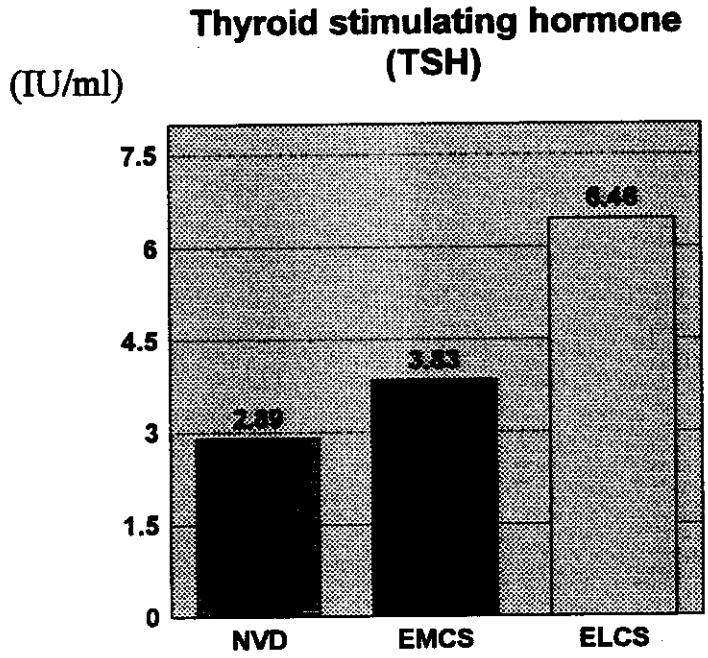

Figure 7. Comparison in levels of Glucose in neonates born by Normal vaginal delivery , Emergency caesarean section and Elective caesarean section

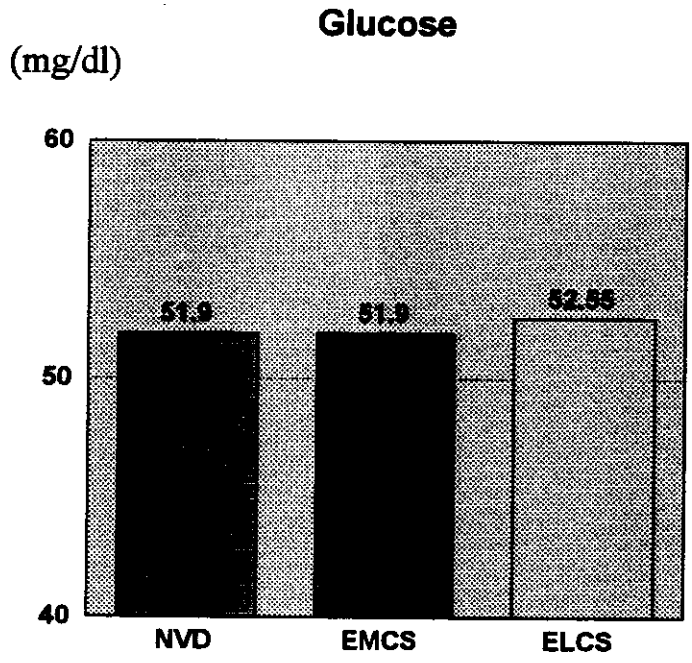

Figure 8. Comparison in levels of Non Esterified Fatty acids in neonates born by Normal vaginal delivery , Emergency caesarean section and Elective caesarean section

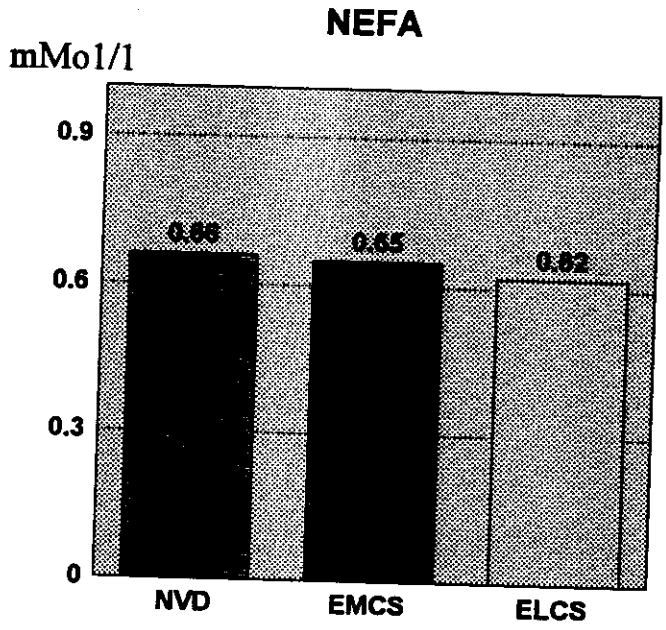

Table 5. Comparison of values of T4 ,T3 &TSH between neonates delivered by Normal vaginal delivery and Elective caesarean section.
mean (± standard error of the mean)

	NVD ***n*=20** ***mean (± SD)***	**ELCS** ***n*= 20** ***mean (± SD)***	**Significance**
T4(ug/dl)	**6.99 (±1.70)**	**12.94 (±0.9)**	**P <0.001**
T3(ng/ml)	**0.6 (±0.06)**	**0.9 (±0.05)**	**P <0.001**
TSH(IU/ml)	**2.89 (±0.6)**	**6.46 (± 0.7)**	**P <0.001**

T4 = Thyroxin.
T3 = Triiodothyronine.
TSH = Thyroid stimulating hormone.
NVD= Normal vaginal delivery.
ELCS = Elective caesarean section.
P = Probability. Significant ($P < 0.05$).

Table 7. Comparison of values of T4 ,T3 &TSH between neonates delivered by Normal vaginal delivery and Emergency caesarean section.
mean (± standard error of the mean)

	NVD *n*=20 *mean (± SD)*	**EMCS** *n*= 20 *mean (± SD)*	**Significance**
T4(ug/dl)	**6.99 (± 1.7)**	**10.25 (± 0.6)**	**P < 0.001**
T3(ng/ml)	**0.6 (± 0.06)**	**0.74 (± 0.04)**	**P < 0.001**
TSH(IU/ml)	**2.89 (± 0.6)**	**3.83 (± 0.7)**	**P < 0.001**

T4 = Thyroxin.
T3 = Triiodothyronine.
TSH = Thyroid stimulating hormone.
NVD= Normal vaginal delivery.
EMCS =Emergency caesarean section.
P = Probability. Significant (P < 0.05).

Table 8. Comparison of values of Glucose & NEFA between neonates delivered by Normal vaginal delivery and Emergency caesarean section

	NVD *n*=20 *mean (± SD)*	EMCS *n*= 20 *mean (± SD)*	P
Glu. (mg/dl)	51.9 (± 9.2)	51.9 (± 9.1)	N.S
NEFA (m Mol/l.)	0.66 (±0.06)	0.65 (±0.02)	N.C

Glu = glucose.
NEFA = non esterified fatty acids.
EMCS = Emergency caesarean sction.
N.S = not significant (P > 0.05).
NVD = Normal vaginal delivery.

Table 9. Comparison of values of T4 ,T3 &TSH between neonates delivered by Elective caesarean section and Emergency caesarean section.

	ELCS *n*=20 *mean (± SD)*	EMCS *n*= 20 *mean (± SD)*	P
T4(ug/dl)	12.94 (±0.9)	10.25 (±0.6)	P <0.001
T3(ng/ml)	0.9 (±0.05)	0.74 (±0.04)	P <0.001
TSH(IU/ml)	6.46 (±0.7)	3.83 (± 0.5)	P <0.001

T4 = Thyroxin.
T3 = Triiodothyronine.
TSH = Thyroid stimulating hormone.
EMCS = Emergency caesarean section.
ELCS = Elective caesarean section.
P = Probability. Significant = ($P < 0.05$).

Table10. Comparison of values of Glucose & NEFA between neonates delivered by Elective caesaren section and Emergency caesarean section.

	ELCS *n*=20 *mean (± SD)*	EMCS *n*= 20 *mean (± SD)*	P
Glu. (mg/dl)	52.55 (± 8.7)	51.9 (± 9.1)	N.S
NEFA (m Mol/l.)	0.62 (±0.02)	0.65 (±0.02)	N.C

Glu. = glucose.
NEFA = non esterified fatty acids.
EMCS = Emergency caesarean sction.
N.S = not significant (P > 0.05)
ELCS = Elective caesarean section

Analysis of the results

Table (1) & Figures 1, 2, 3 : Show a comparison of birth weight, gestational age and duration of labour between newborn infants delivered by normal vaginal delivery and those delivered by emergency caesarean sections.

Mean birth weight in the group delivered by N.V.D. was 3.1± 0.2 kg and in the group delivered by emergency C.S. was 3.22± 0.4 Kg with no significant difference between the 2 groups ($p>0.05$) (Fig. 3).

Mean gestational age in the newborn infants delivered by N.V.D. was 39±0.5 weeks and in those delivered by C.S. was 40±0.3 weeks with no significant difference between the 2 groups ($p>0.05$) Fig. (1).

Duration of labour was similar in the 2 groups, it was 9.6 ± 3.7 hrs in the normal vaginal delivery group and was 10.5 ± 1.3 hrs in the group delivered by EMCS. ($p>0.05$) Fig. (2)

Table (2) & Figures 1, 3 : Show a comparison of birth weight and gestational age between neonates delivered by N.V.D and those delivered by elective C.S.

Mean birth weight in the normal vaginal delivery group was 3.1±0.2 Kg and in those delivered by elective caesarean sections was 3.15±0.2 kg, with no significant difference between the 2 groups ($p>0.05$) Fig. (3)

Mean gestational age was 39±0.5 weeks in the normal vaginally delivered group and was 39±0.2 weeks in the group delivered by elective C.S. with no significant difference between the 2 groups ($p>0.05$) Fig.(1)

Table (3) & Figures 1, 3: Show a comparison of birth weight and gestational age between neonates delivered by emergency caesarean sections and those delivered by elective caesarean sections.

Mean birth weight in newborn infants delivered by emergency caeserean sections was 3.22±0.4 kg and in those delivered by elective caesarean sections, it was 3.15±0.2 kg, with no significant difference between the 2 groups ($p>0.05$) Fig. (3)

Mean gestational age in the newborn infants delivered by emergency caesarean sections was 40±0.3 weeks and in those delivered by elective caesarean sections it was 39±0.2 weeks with no significant difference between the 2 groups ($p>0.05$) Fig. (1).

Table (4) & Figures 4, 5, 6, 7, 8 :Show the mean values of T_4, T_3, TSH, Glucose and NEFA plus or minus standard errors of deviation in the 3 groups.

The mean thyroxin (T_4) concentration in newborn infants delivered by normal vaginal deliveries was 6.99±1.7 ug/dl, and in newborn infants delivered by emergency caesarean sections, it was 10.25± 0.6 ug/dl, and it

was 12.94± 0.9 ug/dl in those delivered by elective caesarean sections. Fig. (4).

The mean triiodothyronine (T_3) concentration in newborn infants delivered by normal vaginal deliveries was 0.6± 0.06 ng/ml, and in newborn infants delivered by emergency sections it was 0.74± 0.04 ng/ml, and it was 0.9 ± 0.05 ng/dl in those delivered by elective caesarean sections. Fig. (5)

The mean TSH concentration in newborn infants delivered by normal vaginal deliveries was 2.89±0.6 IU/ml, and in those delivered by emergency caesarean sections it was 3.83±0.5 IU/ml, and it was 6.46±0.7 IU/ml in the group delivered by elective caesarean sections. Fig. (6)

The mean concentration of umbilical serum glucose in newborn infants delivered by normal vaginal deliveries was 51.9 ±9.2 mg/dl, and in those delivered by emergency caesarean sections it was 51.9+9.1 mg/dl, and it was 52.55±8.7 mg/dl in the group delivered by elective caesarean sections. Fig. (7)

The mean concentration of umbilical serum non esterified fatty acids in newborn infants delivered by normal vaginal deliveries was 0.66±0.06 mMol/l, and in the group delivered by emergency caesarean sections it was 0.65±0.02 mMol/l, and it was 0.62±0.02 mMol/l in those delivered by elective caesarean sections. Fig. (8)

Table (5) & Figures 4, 5, 6: Show a comparison of values o T_4, T_3 & TSH between newborn infants delivered by normal vaginal deliveries and those delivered by elective caesarean sections.

Mean umbilical serum concentration of T_4 in the normal vaginal delivered group were significantly lower ($p<0.01$) than that of the group delivered by elective caesarean sections Fig.(4)

Mean umbilical serum concentration of T_3 in the newborn infants delivered by normal vaginal deliveries were significantly lower ($p<0.001$) than that of the elective caesarean sections group. Fig. (5)

Mean umbilical serum concentration of TSH in the normal vaginally delivered group were significantly lower ($p<0.001$) than that of the elective caesarean sections group. Fig.. (6)

Table (6) & Figures 7, 8 : Show a comparison of values of glucose and non esterified fatty acids (NEFA) between newborn infants delivered by N.V.D. and those delivered by elective caesarean sections.

There were no significant differences between the mean concentration of glucose ($p>0.05$) in both groups. Fig. (7)

Also, there were no significant differences between the mean concentration of NEFA in both groups ($p>0.05$) Fig. (8)

Table (7) & Figures 4, 5, 6 : Show a comparison of values of T_4, T_3, & TSH between newborn infants delivered by normal vaginal deliveries and those delivered by emergency caesarean sections.

Mean umbilical serum concentration of T_4 in the normal vaginally delivered group were significantly lower ($p<0.001$) than that of the group delivered by emergency caesarean sections. Fig. (4)

Mean umbilical serum concentration of T_3 in the newborn infants delivered by normal vaginal deliveries were significantly lower ($p<0.001$) than that of the group delivered by emergency caeserean sections. Fig. (5)

Mean umbilical serum concentration of TSH in the newborn infants delivered by normal vaginal deliveries were significantly lower ($p<0.001$) than that of the group delivered by emergency sections Fig. (6)

Table (8) & Figures 7, 8 : Shows a comparison of values of glucose and NEFA between the newborn infants delivered by normal vaginal deliveries (NVD) and those delivered by emergency caesarean sections (EMCS).

There were no significant difference between the mean concentrations of glucose in newborns delivered by either normal vaginal deliveries or emergency caesarean sections. Fig. (7)

There were also no significant difference between the mean concentrations of NEFA in the newborn infants of both groups. Fig. (8)

Table (9) & Figures 4, 5, 6 : Show a comparison of mean concentrations of T_4, T_3, and TSH between newborn infants delivered by elective caesarean sections and those delivered by emergency caesarean sections.

Mean umbilical serum T_4 concentration in newborn infants delivered by elective caesarean sections were significantly higher ($p<0.001$) than that of the group delivered by emergency caesarean sections. Fig. (4)

Mean umbilical serum T_3 concentration in newborn infants delivered by elective caesarean sections were significantly higher ($p<0.001$) than that of the group delivered by emergency caesarean sections. Fig. (5)

Mean umbilical serum TSH concentration in newborn infants delivered by elective caesarean sections were significantly higher ($p<0.001$) than that of the group delivered by emergency caesarean sections. Fig. (6)

Table (10) & Figures 7, 8 : Show a comparison of mean values of glucose and NEFA between newborn infants delivered by elective caesarean sections and those delivered by emergency caesarean sections.

There were no significant differences between the mean umbilical concentrations of glucose in the two groups,. Fig. (7)

Also, There were no significant difference between the mean umbilical concentrations of NEFA in the two groups. Fig. (8)