

RESULTS

The study group consisted of 60 patients who fulfilled the entry criteria by having two or more amniotic fluid index measurements with reliable gestational dates and who delivered in our hospital allowing outcome variables to be obtained.

The mean ages of patients was 24.7 ± 3.9 years. Thirty three were multigravida and twenty seven were primigravida (Table 1).

The range of gestational ages was 41 to 44 weeks (Table 2 &3).

The mean gestational age for the first and last ultrasonographic examinations were 41.5 ± 0.3 weeks and 42.6 ± 0.4 weeks respectively (Table 1, 2 &3).

One patient (1.7%) showed no change in amniotic fluid index. Nineteen postterm patients (31.7%) demonstrated an increase in amniotic fluid index between serial ultrasonographic examinations. Forty patients (66.5%) had a drop in amniotic fluid index. Seven of the patients who had a decrease in amniotic fluid index had a final value ≤ 5 cm. So, oligohydromnios ($AFI \leq 5$) was demonstrated in 7 of the 60 patients (11.66%) who fulfilled the entry criteria (Table 4).

The mean amniotic fluid index at 41 weeks, 42 weeks and 43 weeks were 12.5 ± 3 cm, 11.5 ± 3 cm and 8.9 ± 3.9 cm respectively (Table 5).

The presence of fetal heart rate abnormalities, meconium staining and low apgar score was significantly higher when the amniotic fluid index ≤ 5 cm (Table 6, 7, 8 & 9).

Three newborn were admitted to neonatal intensive care unit because of meconium aspiration (Table 10 & 11).

No mortality was observed in the studied population.

Table (1): Details of subjects studied.

Group characteristics	Mean	± S.D.
Age (in years)	24.7	3.9
Gest. age at 1 st visit (in weeks)	41.5	0.3
Gest. age at delivery (in weeks)	42.6	0.4

- Thirty three patients (55%) were multigravida and twenty seven patients (45%) were primigravida.

Table (2): Distribution of the studied group according to starting of A.F.I. evaluations.

Starting Of evaluations	No.	%
At 287 days (41 w.)	36	60.00
At 288 - 290 days	15	25.00
At 291 - 294 days (42 w.)	6	10.00
	2	3.33
At 295 - 298 days	1	1.67
At 301 days (43 w.)	60	100.0
Total		

Table (3): Distribution of the studied group according to ending of A.F.I. evaluations.

Ending of evaluations	No.	%
At 294 days (42 w.).	30	50.00
At 295 - 298 days.	18	20.00
At 299 - 301 days (43 w.).	9	15.00
	2	3.33
At 302 - 306 days.	1	1.67
At 308 days (44 w.).	60	100.0
Total		

Table (4): Distribution of the studied group according to A.F.I. changes on evaluations.

A.F.I. changes	No.	%
* Not changed	1	1.6
* Increased	19	31.7
Decreased :	40	66.7
AFI ≤ 5	7	11.7
	33	55

AFI > 5		
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Table (5): Amniotic fluid index (AFI) levels at 41, 42 and 43 weeks.

AFI	Mean	± S.D.
At 41 weeks	12.5	3
At 42 weeks	11.5	3
At 43 weeks	8.9	3.9

Table (6): Relation of A.F.I. to intrapartum C.T.G.

Intrapartum C.T.G.	AFI			
	≤ 5		> 5	
	No.	%	No.	%
Normal	0	0	47	88.7
Abnormal	7	100.0	6	11.3
Total	7	100.0	53	100.0

Table (7): Relation of A.F.I. to Meconium grades.

Mecon. Grade	AFI			
	≤ 5 (n = 7)		> 5 (n = 53)	
	No.	%	No.	%
I	0	0	7	13.2
II & III	7	100.0	4	7.6
Absent	0	0	42	79.2

Table (8): Relation of A.F.I. to Apgar score 1 min.

Apg. Score 1 min	AFI			
	≤ 5 (n = 7)		> 5 (n = 53)	
	No.	%	No.	%
< 7	6	85.7	17	32.1
≥ 7	1	14.3	36	67.9

Table (9): Relation of A.F.I. to Apgar score 5 min.

Apg. Score 5 m.	A.F.I.			
	≤ 5 (n = 7)		> 5 (n = 53)	
	No.	%	No.	%
< 7	4	57.1	2	3.8
≥ 7	3	42.9	51	96.2

Table (10): Relation of A.F.I. to intrapartum G.T.G., meconium grades, Apgar score, mode of delivery and admission to neonatal I.C.U.

	A.F.I.				Z	P
	≤ 5 (n = 7)		> 5 (n = 53)			
	No.	%	No.	%		
Abnormal C.T.G.	7	100.0	6	11.3	6.856	< 0.05 S
Mecon. Grades II, III	7	100.0	4	7.6	6.999	< 0.05 S
Apg. Score 1m. < 7	6	85.7	17	32.1	2.947	< 0.05 S
Apg. Score 5 m. < 7	4	57.1	2	3.8	1.894	> 0.05 NS
C.S.	4	57.1	0	0	2.309	< 0.05 S
Adm. To I.C.U.	3	42.7	0	0	1.500	> 0.05 NS

S = Significant

NS = Non significant

Table (11): Relation between intrapartum C.T.G. and meconium grades
Apgar score, mode of delivery and admission to neonatal
I.C.U.

	Intrapartum C.T.G.				Z	P
	Normal (n = 47)		Abnormal (n = 13)			
	No.	%	No.	%		
Mecon. Grades II, III	1	2.1	10	76.9	3.807	< 0.05 S
Apg. Score 1m. < 7	29	61.7	13	100.0	4.243	< 0.05 S
Apg. Score 5m. < 7	1	2.1	5	38.5	1.391	> 0.05 NS
C.S.	0	0	4	30.8	1.333	> 0.05 NS
Adm. To I.C.U.	0	0	3	23.1	0.949	> 0.05 NS

S = Significant

NS = Non significant

Table (12): Validity of A.F.I.

Validity	A.F.I.
Sensitivity	86.7%
Specificity	98.3%
PPV	97%
NPF	64.7%

PPV = Positive predictive value

NPV = Negative predictive value

Reactive NST

Non reactive NST

A.F.I. = 7.3 cm.