SUMMARY AND CONCLUSION
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In the present study, lecithin and sphingomyelin levels and their ratio (L/S) in amniotic fluid were studied in normal and abnormal pregnancies.

In total 215 samples were studied including 130 cases of normal pregnancy. Out of which 80 cases were followed up discharge. Similarly 85 abnormal cases were studied, and 61 were followed through delivery till discharge. From this study, it was concluded that-

1) Amniotic fluid lecithin values show gradual rise throughout pregnancy up to 35 weeks, when there is a sudden spurt. The rise after that is again gradual till term.

2) Sphingomyelin shows gradually declining in values throughout pregnancy.

3) Lecithin is the principal phospholipid of late pregnancy while sphingomyelin appeared to be the principal phospholipid of early pregnancy.

4) L/S ratio showed a general rise throughout pregnancy till term. The rate of rise though sustained, showed a sudden and marked rise between 35-36 weeks, thereafter the rate of rise is again gradual.

5) The sudden rise in lecithin and L/S ratio values from about 35 weeks of gestation signified the maturity of fetal lung.
(6) No values of L/S exceeded 1.0 prior to the 36th week of this gestation. More than 80% cases had L/S ratio less than 1.0 upto 34 weeks of pregnancy. Thereafter a pattern reversed and 46.67% cases had more than 1.0 L/S ratio while only 33.33% had less than 1.0 L/S ratio.

This trend was maintained advancing gestational age showing more than 1.0 L/S ratio in 94.44% and only 5.56% had less than 1.0 L/S ratio at term (38-40 weeks of pregnancy).

(7) All the neonates remained well in the normal group except 2, who had mild R.D.S, which were completely revived.

(8) This further confirmed the significance of L/S ratio which was 1.0 or above in almost all the cases; the level which has been claimed as safe from the viewpoint of pulmonary function by various authors.

(9) A direct relationship was observed between L/S ratio and birth weight.

**Group II (Air-Oral Delivery, Cy. Cases)**

According to our results the L/S ratio was 4.0 and more always indicated a mature mature lung and hence bright chances of survival.

**Prematurity** - In nearly half of cases L/S ratio was less than 1.0. Mortality rate was 33%. All had L/S ratio less than 1.0 except one who died of septicemia. Incidence of R.D.S was 70%.
The values were higher as a compare to normal group at same gestation period due to patients being in labour.

L/S ratio thus can be helpful in deciding about induction of labour. According to our study labour should never be induced if L/S ratio is less than 1.0.

Prenatal distress :- 75% babies developed R.D.S. and about 62.5% had (5 cases) L/S ratio more than 4.0. Mortality rate was 25% out of which 75% had L/S ratio less than 4.0.

Prematurity :- Values of L/S in all more than 3.0 and incidence of R.D.S were nil. This showed that level of L/S ratio is directly proportional to the fetal maturity.

Twins :- Monotes with more than 2.0 L/S ratio had very little chance of developing R.D.S. The levels of L/S ratio were higher as compared to the Group I cases due to patients being in labour.

Pneumonia of Pregnancy :- Values of L/S ratio was higher as compared to normal pregnancy group I in corresponding gestation period. This denotes significant pulmonary maturity atonal rotation.

Antepartum Hemorrhage :- In A.P.H. high incidence of mortality and R.D.S. was seen though the L/S ratio was more than 2.0 in most of these cases.
**Hyd. Syndrome**  ➔ Slightly lower values of L/S ratio were observed.

**Hemat. Disease**  ➔ No significant disease change was observed, in L/S ratio from that of normal pregnancy values.

**Abruption Incompleteness**  ➔ L/S ratio was not affected.

**Hydramnios**  ➔ L/S ratio was normal except in 25% cases, where the baby developed mild A.D.A.

**Diabetes Mellitus**  ➔ Normal L/S ratio values were observed.