SUMMARY AND CONCLUSIONS

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The present study was carried out in the department of Obstetrics and Gynaecology, M.L.B. Medical College, Jhansi in active collaboration with the department of Pathology and department of Paediatrics from 28th May’ 82 to March’83. The case material for the present study was obtained from the mothers and their newborns delivered in M.L.B. Medical College Hospital.

The study comprised of 80 cases of labour, divided into 4 groups.
A. Group - I - 30 cases of normal spontaneous labour which served as control.
B. Group - II - 20 cases of accelerated labour, here augmentation was done by syntocinon in cases of uterine inertia.
C. Group - III - 20 cases of induced labour.
D. Group - IV - 10 cases of caesarean section.

All the cases of labour were full term and there was no history of jaundice and intake of drugs by the mother which could have adversely affected the results of our study.

The patients were carefully evaluated through a history of present pregnancy, past illness, elaborate menstrual and obstetrical history. A thorough general and systemic examination, alongwith abdominal and per vaginum examination was done in each case before delivery.
Labour was monitored in all cases by careful assessment of uterine contractions and fetal heart rate patterns. Acceleration was done in cases of uterine inertia after spontaneous labour had set in, whereas induction was done in 7 cases of postmaturity 6 cases of leaking, 5 cases of preeclamptic toxaemia and 2 cases of placenta praevia. Caesarean section was performed in 3 cases of failed induction, due to lack of progress in two and occipito posterior position and transverse lie.

In cases of augmented labour, total dose of oxytocin administered and the induction delivery interval was calculated in each case. Induction was done by the Physiological Drip of Theobald (1948).

Cord blood was taken at the time of delivery for estimation of ABO and Rh grouping and serum bilirubin levels. Again blood was collected on the 5th day from femoral vein for estimation of serum bilirubin.

Following summarises the salient features of our study:

1. 50.0% of our cases, both control and study group, belonged to the age group 21-25 years. A majority of cases, 76.0% of the control group and 91.0% of the study group patients were under the age of 30 years. None of the cases in the series exceeded 35 years.

2. Parity in the control group ranged from P0 - P6, whereas in cases in which oxytocin was administered
it was essentially limited to less than $P_4$. In the accelerated group 60.0% of cases belonged to 1st and 2nd para whereas in the induced group 60.0% of cases were primigravidae.

3. In all the groups the gestational age was beyond 37 weeks to exclude the adverse effect of prematurity on neonatal jaundice.

4. In those cases induced with oxytocin the Bishop's pelvic score was more than 7. The duration of 1st and 2nd stage of labour in the control group was 11 hrs. and 1.8 hrs. respectively. In the accelerated and induced groups, the 1st and 2nd stage of labour was considerably shortened to 4.8 and 1.1 hrs. and 8 and 1.6 hrs. respectively, since oxytocin stimulates rapid uterine contractions, resulting in early labour.

5. A direct positive correlation was observed between the reduction of induction delivery interval and the total dose of oxytocin. Cases of accelerated labour having a shortened induction delivery interval ($4.5 \pm 2.72$ hr), required lower mean values of oxytocin ($382 \pm 298.346$ m.I.U.), whereas with a greater induction delivery interval ($10.125 \pm 2.98$), as seen in induced cases, the corresponding oxytocin doses were $849 \pm 335.636$ m.I.U.). Since spontaneous labour had already set in before acceleration was done by oxytocin the induction delivery interval (length of
labour) was shorter in these cases as compared to those of induced labour.

6. A total of 80 newborns were examined. All the newborns had an uneventful delivery with an Apgar score of more than 7 at birth. All the newborns were full term, weighing more than 2.5 kg and during the period of observation in the hospital, none had evidence of asphyxia, sepsis, cephalhaematoma or evidence of blood group incompatibility. Those cases which had any of these problems were excluded from the study.

7. The mean cord blood bilirubin levels (mg%) in our study were, Control group (1.48±0.43), Accelerated group (1.49±0.21), Induced group (1.52±0.25) and Caesarean group (1.43±0.26). It was seen that cord blood bilirubin levels remained in the normal range (1 to 5 mg%) and were statistically insignificant from each other (P > 0.05). Moreover no rise was evident in augmented as compared to unaugmented labours.

8. On the 5th day in the control group, serum bilirubin (mg%) had mean values of (2.08±1.27), whereas in the accelerated, induced and caesarean section group, the mean levels were, 2.310±1.5, 2.895±1.996 and 1.85±1.498 respectively. Our findings reveal, that those newborns who were delivered after induction with oxytocin (accelerated and induced group), had higher mean levels of bilirubin on the 5th day, as
compared to lower levels of bilirubin observed in the unaugumented group, however no statistically significant difference was observed between the two values.

9. An attempt was made to derive a correlation between the total dose of oxytocin administered and the severity of jaundice. It was seen, that with increasing doses of oxytocin (m.I.U.) from \( \leq 500 \), 500-1000 and \( > 1000 \), the corresponding serum bilirubin levels were 1.8, 2.48 and 5.275 mg% respectively.

It was evident from these findings that the group when the dose of oxytocin was \( > 1000 \) m.I.U. had highest mean serum bilirubin levels on the 5th day and these values were statistically significant from those of the control (\( P \leq 0.05 \)). However no statistical significant difference was observed in the mean serum bilirubin values corresponding to doses \( \leq 1000 \) m.I.U.

On the basis of the above mentioned results it is concluded, that the use of oxytocin in labour can not be condemned on grounds of fetal safety, provided the dose of oxytocin does not exceed 1000 m.I.U.