CLINICAL STUDY OF LABOUR IN TWIN PREGNANCY
Amudha S¹, Chaitra Sathyanarayana²

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ABSTRACT: OBJECTIVES: The objective of the present study is to analyse the incidence of preterm labour, intrapartum complications, incidence of operative delivery both vaginal and cesarean and indications for such interventions. METHODOLOGY: A total of 150 cases of twin pregnancy were analyzed between the period of September 2012 to February 2014. These cases were studied with respect to period of gestation at the onset of labour, fetal presentations at the onset of labour, route and mode of delivery, indications in cases of cesarean delivery, intrapartum complications and delivery interval between twins. OBSERVATIONS AND RESULTS: In the present study there was increased incidence of preterm labour (52.6%), fetal malpresentations (43.3%), operative vaginal delivery (29.5%), cesarean delivery (17.3%). CONCLUSION: In this study it is observed that above mentioned labour events and complications double up in the event of a twin pregnancy. Regular antenatal visits, planned delivery and anticipation and identification of complications will help for better pregnancy outcome.

KEYWORDS: Twins, Preterm labour, Cesarean delivery, Intrapartum complications.

INTRODUCTION: Twin pregnancy is the simultaneous development of two embryos in the uterus at the same time. The incidence of twins is on rise as a result of increasing use of ovulation induction and assisted reproductive technology. Twin pregnancy is associated with greater maternal and fetal complications than singleton pregnancy.¹

The incidence of preterm delivery is comparatively high in twins than singleton pregnancy. As compared to vaginal singleton birth, there is an increased likelihood of operative delivery for one or both twins, with the associated maternal risks of trauma, infection and haemorrhage.² Twins are more frequently delivered by cesarean section than singletons, either as an elective procedure or as an emergency before or after the delivery of first twin.³ This study intends to know the period of gestation at the onset of labour and incidence of vaginal delivery, operative vaginal delivery, cesarean section rate and indications for cesarean delivery in twin pregnancy and management of labour.

METHODOLOGY: MATERIALS AND METHODS: This is a prospective study, done at Vanivilas hospital attached to Bangalore Medical College and Research Institute, Bangalore during the period from September 2012 to February 2014, for 18 months which includes 150 cases. All the twin pregnancies with gestational age ≥28 weeks were included irrespective of age, parity and associated diseases and complications. Detailed histories regarding twinning in family, symptoms of each complication were taken.

Detailed general, systemic and obstetric examination and routine investigations for blood and urine were done in all patients.
When the pregnant lady went into labour, the duration of gestation was recorded. At the onset of labour, detailed per vaginal examination was done to note the cervical dilatation, presentation, position, the level of the presenting part and the type of the pelvis. Complications during labour such as hand prolapse, cord prolapse, postpartum hemorrhage etc. were noted. Necessary precautions were taken to prevent complications during labour. Labour was accelerated by oxytocin whenever indicated. In cases where there was contraindication for vaginal delivery, they were taken up for cesarean section. Careful intrapartum monitoring was done. Third stage of labour was managed carefully. Mother and babies were followed till discharge.

RESULTS: The following data was obtained from the present study.

The incidence of twin pregnancy is about 1.4%. Among the total 150 cases, 34.2% were booked rest were unbooked cases.

From table no 1 it can be seen that 79(52.6%) had delivered before 37 completed weeks. In the present series 85(56.7%) cases presented by vertex -vertex and rest had malpresentations. one case of fetus papyraceus and one case of acardiac twin constitute missing cases as shown in table no 2.

In present study 122(81.3%) cases had vaginal delivery, 26(17.3%) had cesarean delivery where as in 2(1.4%) cases first baby delivered by vaginal route and second baby by cesarean delivery.

As shown in table no 3, in the present series in 124(82.7%) cases first twin delivered vaginally, among which 11(7.3%) were instrumental deliveries.

Vaginal delivery rate for second twin was 81.3% (122 cases) and instrumental delivery rate was 18% (27 cases).

All assisted and operative deliveries were more common in twin deliveries especially so for the second twin.

In the present study cesarean section rate in the present series is 17.3% and cesarean section rate for only second fetus was 18.7%. Here cesarean section was done for second fetus because of failed internal podalic version in 2 cases. Indications for cesarean delivery are shown in table no 4.

In 126(84%) cases second twin was delivered within 15 minutes of delivery of the first twin. In 18(12%) cases the delivery interval between I and II twins was 16-30 min; 4(2.7%) cases between 30-60 min and 2(1.3%) cases it was more than one hour, both resulting in fetal loss.

As shown in table no 5, 2 cases (1.4%) had hand prolapse and 1 case (0.7%) ended up with retained placenta which was removed manually under general anesthesia. 1(0.7%) had cordd prolapse and 8(5.3%) had post-partum haemorrhage, all managed conservatively by giving uterotonic drugs.

DISCUSSION: Incidence of preterm labour in present study is 52.6%. Incidence is slightly higher compared to other studies as shown in table no 6. Main reason might be due to the high number of unbooked cases referred to us, ours being a tertiary care Centre.
In the present series, out of 79 cases of preterm delivery 65(89.3%) were unbooked cases and 6(10.7%) were booked cases.

In table no 7 the incidence of various combinations of presentations in this study is compared with those of other authors.

The present series findings are comparable with that of Pandole A et al. series.(4) In Chevernak series(5) 57.5%, in Tempe series 50.3%,(6) in Shailesh Kore(7) 58.1% and in Pandole A(4) series 52.6% had malpresentation.

The results of study of route of delivery are comparable with that of Farouqui et al.(8) series and Shola Purkar(9) series as shown in table no. 8.

As shown in table no 9, regarding mode of delivery the results of the present series are comparable with that of Pandole A(4) series.

All assisted and operative deliveries were more common for the second twin. The only exception was assisted breech delivery which was more common in the first twin (15.3%) compared to the second twin (13.3%).

The delivery interval between two twins is compared with other studies in table no. 10. In the present series in majority of cases (84%) delivery interval was less than 15 minutes. Out of 150 cases, one patient had come with history of having delivered the first baby at home. The interval between the delivery of the first and second baby was 480 minutes.

The incidence of postpartum hemorrhage is 5.3% which is lower than other studies. The reduced incidence of PPH is due to the prophylactic measures taken in anticipation, especially prophylactic methergine given during the delivery of anterior shoulder of second twin.

CONCLUSION: In this study it is observed that above mentioned labour events and complications double up in the event of a twin pregnancy. Regular antenatal visits, planned delivery and anticipation and identification of complications will help for better pregnancy outcome.

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| GA (weeks) | Number of cases | Percentage |
|------------|-----------------|------------|
| 28-32      | 35              | 23.3%      |
| 33-36      | 44              | 29.3%      |
| ≥ 37 weeks | 71              | 47.4%      |

Table 1: Duration of gestation at the time of delivery

| Presentation | Number of cases | Percentage |
|--------------|-----------------|------------|
| Vx-Vx        | 85              | 56.7       |
| Vx-B         | 25              | 16.7       |
| B-Vx         | 17              | 11.3       |
| B-B          | 12              | 8.1        |
| Vx–T         | 4               | 2.6        |
| T-B          | 2               | 1.3        |
| B–T          | 2               | 1.3        |
| T-Vx         | 1               | 0.7        |
| Missing      | 2               | 1.3        |

Table 2: Combination of presentations

| Mode of delivery | Number I twin | Percentage I twin | Number II twin | Percentage II twin |
|------------------|---------------|------------------|----------------|-------------------|
| Normal delivery  | 84            | 55.9             | 74             | 49.3              |
| Assisted breech delivery | 23 | 15.3       | 20             | 13.3              |
| Ventouse assisted delivery | 16 | 10.8      | 24             | 16.1              |
| Outlet forceps delivery | 01 | 0.7        | 03             | 1.9               |
| Cesarean section | 26            | 17.3             | 28             | 18.7              |
| Craniotomy       | -             | -                | 01             | 0.7               |

Table 3: Mode of delivery in the present series
### Indications

| Indications                                                                 | Number of cases | Percentage |
|-----------------------------------------------------------------------------|-----------------|------------|
| First twin transverse lie                                                  | 3               | 10.8       |
| Previous LSCS with complications like abruption, both twins with breech presentation | 9               | 32.4       |
| First twin complete breech with severe PE                                  | 2               | 7.1        |
| Second twin transverse lie with failed IPV                                 | 2               | 7.1        |
| Second twin transverse lie                                                  | 4               | 14.2       |
| Failure to progress                                                         | 4               | 14.2       |
| Fetal distress                                                             | 2               | 7.1        |
| Central placenta previa                                                     | 2               | 7.1        |
| **Total**                                                                  | **28**          | **100**    |

Table 4: Indication for cesarean section in present series

### Intrapartum complications

| Type                 | Number of cases | Percentage |
|----------------------|-----------------|------------|
| Cord prolapse        | 1               | 0.7        |
| Hand prolapse        | 2               | 1.4        |
| Retained placenta    | 1               | 0.7        |

Table 5: Intrapartum complications

### Incidence of preterm labour as per different authors

| Studies             | Percentage |
|---------------------|------------|
| Rani R(10)          | 45.5       |
| Tempe(6)            | 36.84      |
| Present series      | 52.6       |

Table 6: Incidence of preterm labour as per different authors

### Incidence of various combinations of presentations by different authors

| Authors              | Combinations of presentations |
|----------------------|-------------------------------|
|                      | Vx+Vx | Vx-B | B-Vx | B-B | Vx-T | T-Vx | T-B | B-T | T-T |
| Chevernak(5)         | 42.5   | 26.0  | 6.0  | 6.1 | 11.3 | -    | -   | -   | 0.6 |
| Tempe(6)             | 49.7   | 22.8  | 12.89| 11.18| 2.92 | -    | -   | -   | 0.58|
| Shailesh Kore(7)     | 41.87  | 32.5  | 8.54 | 7.44| 5.23 | -    | -   | 3.03| 0.83|
| Pandole A(4) (2003)  | 57.44  | 18.08 | 10.63| 7.44| 2.65 | 0.53 | 1.06| 1.59| 0.53|
| Present study        | 56.7   | 16.7  | 11.3 | 8.1 | 2.6  | 0.7  | 1.3 | 1.3 | -   |

Table 7: Incidence of various combinations of presentations by different authors
Saacs et al.(12) 51.9% 44.2% 3.8%
Shola Purkar(9) 94.4% 5.6% -
Present series 81.3% 17.3% 1.4%

Table 8: Comparison of route of delivery as per different authors

| Mode of delivery | Pandole A (2003)(4) | Present series |
|------------------|---------------------|---------------|
|                  | I       | II      | I      | II      |
| Normal           | 65.96%  | 51.59%  | 55.9%  | 49.3%   |
| Breech           | 9.04%   | 17.02%  | 15.3%  | 13.3%   |
| Forceps          | 0       | 2.65%   | 0.7%   | 1.9%    |
| Ventouse         | 0       | 2%      | 10.8%  | 16.1%   |
| Cesarean         | 25%     | 27.65%  | 17.3%  | 18.7%   |
| Craniotomy       | 0       | 1%      | 0      | 0.7%    |

Table 9: Comparison of mode of delivery as per different authors

| Interval(min) | Tempe(6) | Bhatia(13) | Pandole A(4) | Present series |
|--------------|----------|------------|--------------|----------------|
| < 15         | 60%      | 54.6%      | 59.9%        | 84%            |
| 15-30        | 25%      | 37.4%      | 19%          | 12%            |
| 31-60        | 11.5%    | 6.8%       | 10.3%        | 2.7%           |
| e 60         | 3.5%     | 1.2%       | 10.2%        | 1.3%           |

Table 10: Delivery interval between the first and second twins as per different authors

AUTHORS:
1. Amudha S.
2. Chaitra Sathyanarayana

PARTICULARS OF CONTRIBUTORS:
1. Assistant Professor, Department of Obstetrics & Gynecology, BMC & RI.
2. Senior Resident, Department of Obstetrics & Gynecology, BMC & RI.

NAME ADDRESS EMAIL ID OF THE CORRESPONDING AUTHOR:
Dr. Amudha S,
# C-51, KPWD Quarters,
Jeevanbhima Nagar,
HAL 3rd Stage, Bangalore-75,
Karnataka, India.
E-mail: dramudhabmc@gmail.com

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