

OUTCOME OF TWIN DELIVERIES AT A TERTIARY CARE CENTRE OF EASTERN NEPAL

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Introduction



- The incidence of twins varies with geographical distribution, ethnicity and various maternal factors.
- Twin pregnancy is associated with increased maternal and neonatal morbidity and mortality as well as healthcare costs.
- Twin babies have various growth abnormalities and complications placing them in a vulnerable zone till later life.



- Hence this study done at a tertiary care centre of eastern Nepal (BPKIHS) with the following aims:
  - To describe twinning rates,
  - To find out epidemiological variables, and
  - To determine outcome of twin deliveries at BPKIHS

Materials & Methods



- Retrospective hospital-based study

  Dept. of Paediatrics & Adolescent Medicine, BPKIHS, Dharan, Sunsari District, Nepal

- **Inclusion Criteria:**

  All twin infants born at BPKIHS from 1st Jan -31st Dec 2014

- **Exclusion Criteria**

  Twin infants born outside BPKIHS

  Cases with <28 weeks POG

Materials & Methods…



- Ethical clearance and research approval obtained
- Maternal and neonatal data extracted and analysed
- Standard criteria used for diagnoses:

  → Gestational age (GA) assessment-last menstrual period and confirmed by modified Ballard score method in preterm.



→ Birth weight <2500grams classified as Low Birth Weight (LBW) and <10th percentile for GA as Small for Gestational Age (SGA).

→ Growth discordance was graded as mild, moderate and severe for <15%, 15-30% and >30% discordance respectively.

→ Birth asphyxia was diagnosed according to WHO criteria and sepsis with septic screening.

→ Twin to twin transfusion syndrome (TTTS) was diagnosed as per the neonatal criteria.



- Statistical analysis done using SPSS 17.0 software using descriptive and analytic tests (chi-square tests, independent sample t test, Mann Whitney U test) with significance set at 5% and 95% confidence interval

Results



- Hospital rate of twinning= 9.2/1000 (92/10,031)
- Median parity= 0 (0-1)(0-5)
- Family history of twinning in 17 (18.5%).

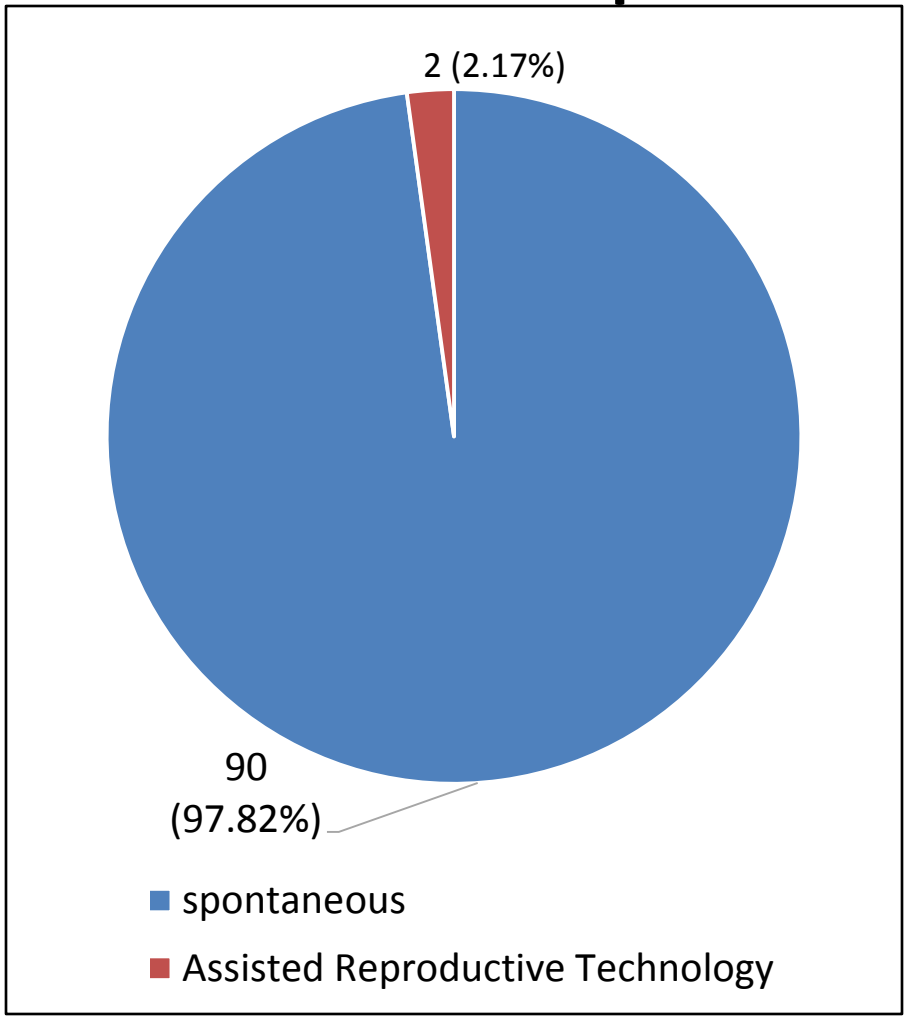
- ***Age distribution of mothers with twin pregnancy***

Maternal age (years)	No. (%)	Mean ± SD
<20	10 (10.9)	23.71 ± 4.05
20-30	76 (82.6)	
>30	6 (6.52)	

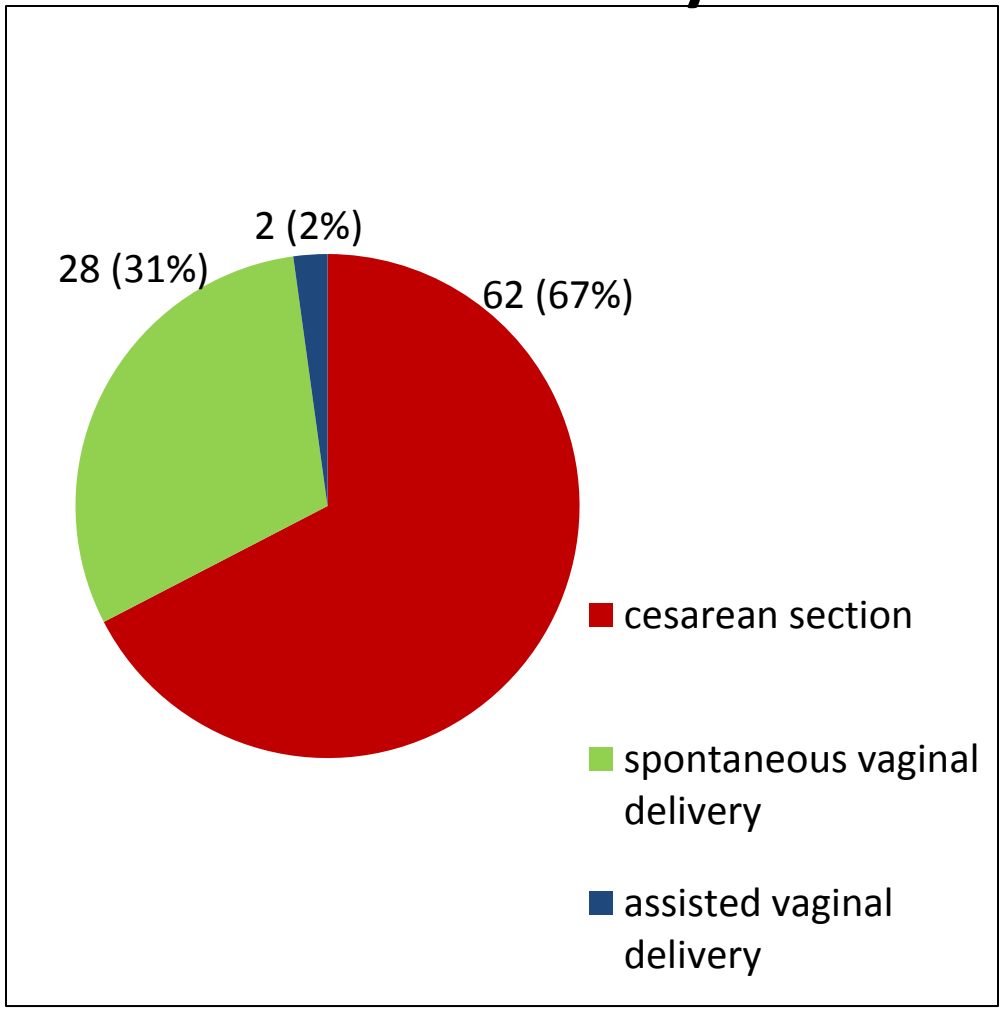
Results..



Mode of conception



Mode of delivery



Results…



- Mean birth weight = 1636.30 ± 339.21 grams
- Mean gestational age = 34.31± 2.67weeks
- Median inter-baby delivery interval = 9.52 ± 11.95 (2.63-10) (1-65) minutes

Results…

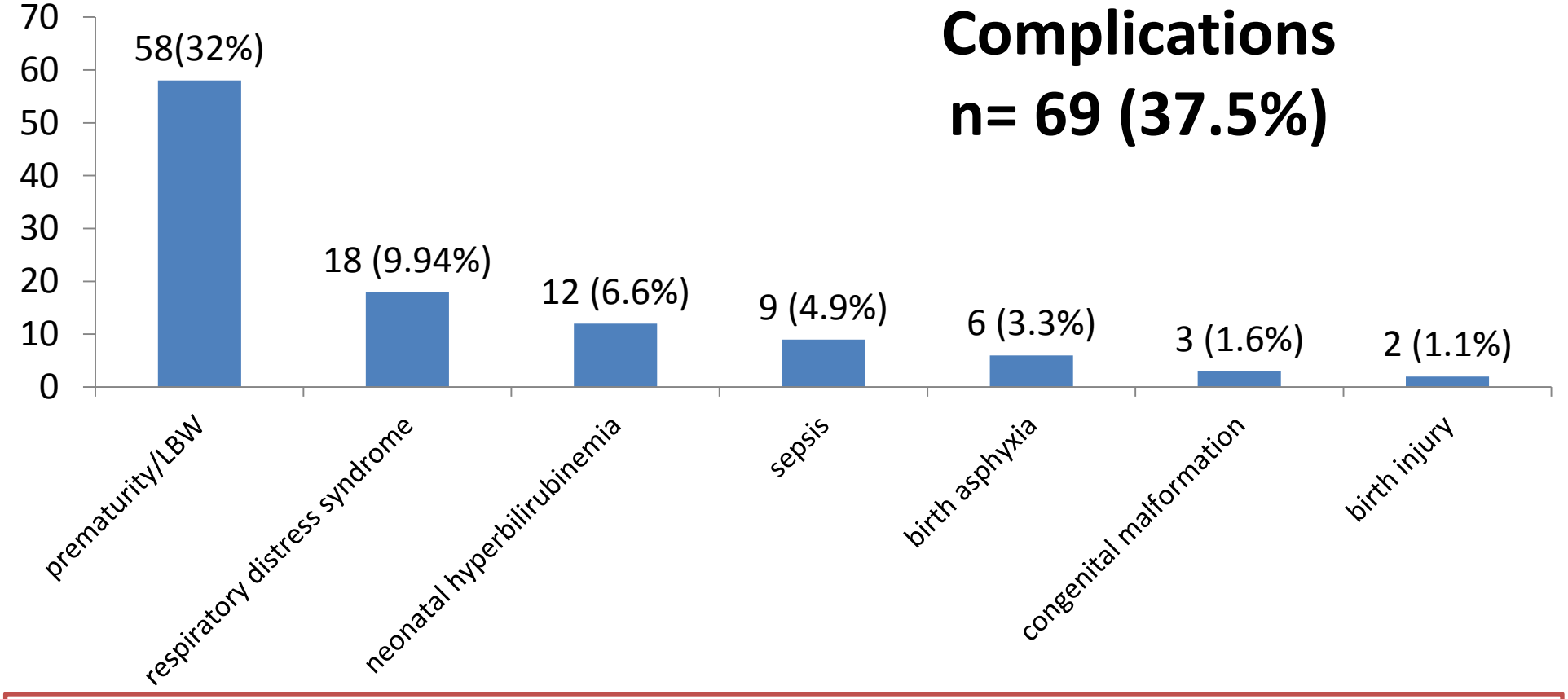


- Preterm=150 (81.5%)
- LBW=182 (98.9%)
- SGA= 59 (32.1%)
- Growth discordance:
  - Mild (68.47%)
  - Moderate (23.9%)
  - Severe (7.63%)

- Still births= 3
- Overall hospital mortality = 10.87% (20/184)

Results…





Complications
n= 69 (37.5%)

Twin to twin transfusion syndrome (TTS): *3 pairs (3.3%)*

Results…

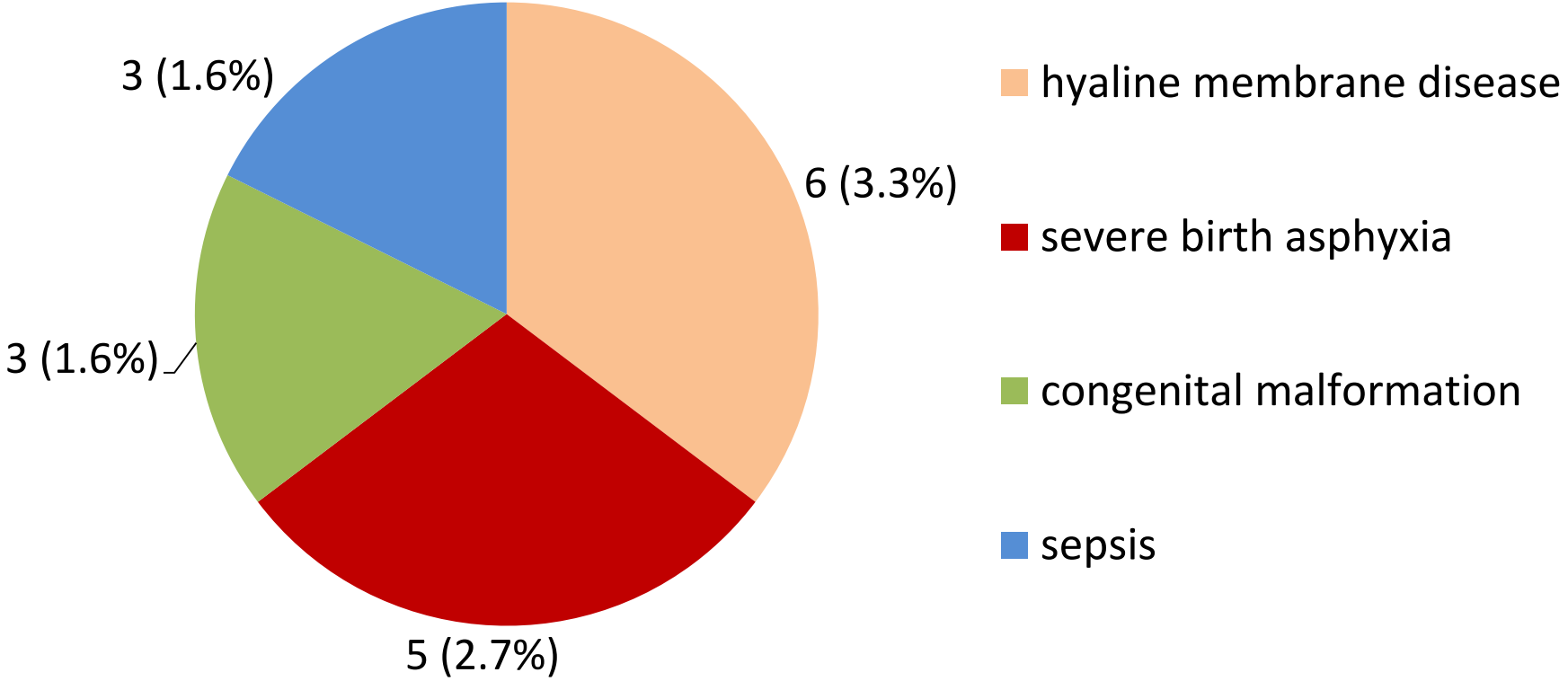


- On comparing twin pairs,
  - 2nd twins significantly lower
    - birth weights t (182)= 170.87, p=0.001, and
    - 5 minute APGAR scores t (179)= 1.97, p=0.04
  - complications difference not statistically significant (p=0.137). However, more deaths in 2nd twin (15) vs 1st twin (5) (p=0.06)

Results…



- **Clinical causes of death (n=17)**



Discussion



- Twining rates reported highest in Africa, lowest in Asia and intermediate in Europe.
- In our hospital of eastern Nepal, rate of 9.2/1000 (not so low..)
- Other studies: directly related to maternal age, parity and Assisted Reproductive Technology (ART) but not in ours…

Discussion…



- Perinatal complications in twins d/t associated prematurity & LBW comparable to others
- Hospital mortality rate 10.87% in twins comparable to Nigerian teaching hospital
- Long term disabilities also reported but long term follow-up studies required

Summary



- Twin delivery is not that uncommon in our part; rathers seems to be common
- Twins are more prone to various complications due to their associated prematurity and low birth weight
- Need to improve antenatal, perinatal management and follow ups for twins for better outcome

Conclusion



- *Twin deliveries are relatively common in our hospital, and associated with low birth weight, prematurity and many other morbidity/mortality related complications including twin to twin transfusion syndrome*

- *Hence further studies with long term follow-ups are recommended for outlining interventional strategies to improve outcome of twin infants in our part.*

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Thank You!

