Group-B Streptococcal Septicaemia in the Paediatric Intensive Care

Larkin EL1, Hall R2, Healy M3, McMahon C4
1 Department of Paediatric Intensive Care, Our Lady’s Children’s Hospital, Crumlin, Ireland
2 School of Medicine, Trinity College Dublin, Dublin, Ireland

Introduction

Group-B streptococcal (GBS) septicaemia:
- Most common cause of early-onset neonatal sepsis (EOS) in Ireland
- Treatment often initiated within maternity units for EOS
- Late-onset sepsis (LOS) is treated within paediatric units
- EOS with multiple co-morbidities & severe LOS require PICU
- Transfer to PICU from regional or maternity units
- UK figures:
  - 50% of EOS is secondary to GBS
  - 8% of LOS is secondary to GBS
- Lack of data for LOS in Ireland

Alms

To assess the morbidity and mortality of GBS sepsis in PICU

Methods

- Retrospective chart review
- Included neonates diagnosed with GBS sepsis
- 5-year period from July 2012 – July 2017
- Requiring treatment in PICU
- N=15
- Patients identified through IntelliVue Clinical Information Portfolio (ICIP) & PICANet
- Data included:
  - Birth history: gestational age, birth weight, maternal GBS status
  - Past history: pre-existing co-morbidities
  - Intervention: PICU and hospital length of stay
  - Ventilation days
  - Inotrope requirement
  - Neuroimaging requirement
  - Outcome: Final disposition, long-term morbidity

Results

- 15 cases were identified over the 5-year period
  - 1 case of recurrent LOS GBS sepsis
  - 12 cases of LOS GBS sepsis
  - 5 cases of pre-term neonates
  - Mean birth weight 2.74kg
  - Average gestational age 36 weeks
  - 3 mothers documented as GBS positive
  - 4 cases have multiple co-morbidities
  - Average hospital length of stay of 17 days (2-34 days)
    - 6.13 days in the PICU (1-17 days)
    - 5.25 ventilation days (0-14 days)
    - 11 cases requiring inotropes
    - 6 requiring more than one
    - 6 cases demonstrated abnormal neuroimaging
  - Outcomes:
    - Mortality of 13% (N=2)
    - Morbidity of 34% (N=5)
    - Not yet determined/unknown 53% (N=8)
    - 1 patient not reached dispensation
    - 5 patients still require their Bayley score
    - 2 patients are followed through local hospitals

Conclusion

- GBS screening is not mandatory & not consistently performed in the third trimester
- It is impossible to predict prevention of LOS GBS with prophylaxis
- Given mortality & long-term consequences of GBS, need for screening and investigation into vaccine development.

Contact

Dr. Elizabeth Larkin
Paediatric Intensive Care Unit
Our Lady’s Children’s Hospital Crumlin
Email: elizabethlarkin@tcd.ie
Website: www.olchc.ie
Twitter: @elilarkin
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References


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