

# Neurosurgical Implications of Group B Streptococcus Meningitis in a Population with Non Antenatal Screening

Tafadzwa T Mandiwanza MBChB BAO, MRCS; Chandrasekaran Kaliaperumal MBBS, FRCSEd(Neuro.Surg); Darach Crimmins; John Caird



Temple Street Children's University Hospital, Dublin 1

#### Introduction

- Meningitis is known to result in long-term neurological complications
- While rigorous vaccination programs and public health awareness initiatives have been implemented to tackle common pathogens for meningitis such as pneumococcal and Meningitis C, no routine screening has been implemented for Group B streptococcus in Ireland.
- There is debate whether routine screening for GBS is indicated.

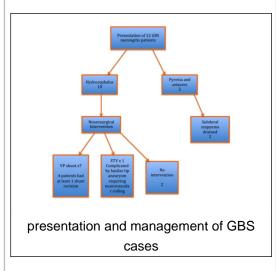
The aim of our study is to assess the neurosurgical implications resulting from GBS meningitis in a single national paediatric neurosurgical centre.

### **Methods**

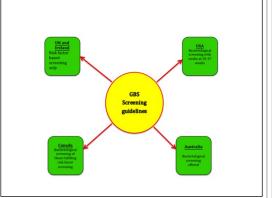
Retrospective review of paediatric patients referred with neurosurgical complications of meningitis from January 2007- December 2012

### Results

- 60 patients with meningitis, 12
  (20%) with GBS meningitis
- All were late onset GBS meningitis
  mean 20 days old at presentation (range 8-40days)
- 83% of mothers not screened antenatally



- Mean number of hospital admissions was 4 (range 1- 18 admissions)
- The longest admission was for 3 months continuously and the shortest was for 3 days
- Long term complications included-Seizure disorder(3), Blindness
   (2), Hemiparesis (2) Cerebral Palsy (3)
- All aside from 2 children require continuing significant multidisciplinary team input and review



- Screening affects the incidence of early onset GBS infections (within 7 days of birth). 60-80% of GBS infections are early onset, most present as sepsis
- Late onset GBS infections (>day 7 of life) more commonly present as meningitis
- Two forms of screening exist: **Risk factor screening**: based on history of previous GBS , Premature delivery, Prolonged rupture of membranes, pyrexia during delivery

## **Bacteriological screening**: vaginal and rectal swabs

- The arguments against screening are:a) that it only marginally increases the number of women detected to be carriers of GBS
- b) That by increasing the number of women receiving prophylactic antibiotic we risk increasing drug resistant strains of GBS
- c) The number of women who need to be treated far exceeds the number of GBS related infections prevented

### Conclusions

Given the severe morbidity and economic implications associated with the sequelae of GBS meningitis it may be prudent to seriously consider or at least continue the debate on routine screening for GBS in our country.

### **Learning Objectives**

The effects of Group B Streptoccoccal infection

The implications of antenatal screening

### References

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