Issues Around Periviability: What is an Obstetrician to do?

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Objectives

• Review new evidence and recent guidelines regarding management of periviable birth
• Explore the implications of changing resuscitation thresholds
• Present a framework for counseling parents facing a periviable delivery
• Focus on the experience and role of the obstetrician in making decisions around resuscitation

Disclosures

• I have no financial disclosures to make
Further down the page...

- 22-week-old babies did not survive without medical intervention.
  - 78 cases with active treatment
    - 18 survived
    - 7 of those did not have moderate or severe impairments.
    - 6 had serious problems such as blindness, deafness, severe CP
- 755 born at 23 weeks
  - 542 cases active treatment
    - One-third survived
    - Half of the survivors had no significant problems.

Impairment Definitions

- Severe impairment
  - cognitive or motor score (Bayley-III) of less than 70
    • (i.e., >2 SD below the scale mean)
  - severe cerebral palsy
  - Gross Motor Function Classification System (GMFCS) level of 4 or 5
    • (scale is 0-5)
  - bilateral blindness (visual acuity, <20/200
  - severe hearing impairment that cannot be corrected with bilateral amplification.

- Moderate impairment
  - Bayley-III cognitive or motor score of 70 to 84
    • (i.e., 1 to 2 SD below the scale mean),
  - moderate cerebral palsy
  - GMFCS level of 2 or 3.

Neurodevelopmental Impairment

<table>
<thead>
<tr>
<th>Outcome Among Survivors</th>
<th>22 N=18</th>
<th>23 N=173</th>
<th>24 N=598</th>
<th>25 N=850</th>
</tr>
</thead>
<tbody>
<tr>
<td>Without Moderate or Severe NDI</td>
<td>7 (39%)</td>
<td>83 (47%)</td>
<td>327 (54%)</td>
<td>523 (61%)</td>
</tr>
<tr>
<td>Moderate NDI</td>
<td>5 (28%)</td>
<td>48 (28%)</td>
<td>160 (27%)</td>
<td>198 (23%)</td>
</tr>
<tr>
<td>Severe NDI</td>
<td>6 (33%)</td>
<td>42 (24%)</td>
<td>111 (19%)</td>
<td>129 (15%)</td>
</tr>
</tbody>
</table>

The small print

- Between 22 - 25 weeks of gestation, there may be mitigating factors (IUGR, malformations, aneuploidy, prolonged membrane rupture) that will affect the determination of viability.

- The majority of survivors born at 25 6/7 weeks of gestation or less will incur major morbidities, regardless of gestational age at birth;

- Data from recent large studies suggest survival with delivery at 22 0/7 through 22 6/7 weeks of gestation to be 5-6%.

- With survival rates of approximately 26-28% and higher, infants born at 23 0/7 weeks through 25 6/7 weeks of gestation are generally considered potentially viable.


NICHD Survival Data


Infant Survival to Discharge

Infant Survival to Discharge Without Major Morbidity
Viability

“In general, those born at 23 weeks of gestation should be considered potentially viable...”


Viability

• “...viability marks the earliest point at which the State’s interest in fetal life is constitutionally adequate to justify a legislative ban on nontherapeutic abortions.”

• “Whenever viability may occur, be it at 23–24 weeks, the standard at the time, or earlier, as may be the standard sometime in the future, the attainment of viability serves as the critical fact in abortion legislature.”


Viability - California

• “the point in a pregnancy when, in the good faith medical judgment of a physician, on the particular facts of the case before that physician, there is a reasonable likelihood of the fetus’ sustained survival outside the uterus without the application of extraordinary medical measures.”

— CA HEALTH AND SAFETY CODE SECTION 123460-123468

From NICHD statement

“importantly, providers and families should understand that initiation of intervention to enhance outcomes (eg, antibiotics for preterm PROM, antenatal corticosteroid administration) does not mandate that all other aggressive interventions (eg. cesarean delivery) be undertaken regardless of clinical circumstances in the periviable period”

Periviable Cesarean

- Increased risk of uterine rupture in a subsequent pregnancy
  - 1.8% (8/456) vs. 0.4% (38/10,505)
    - Even excluding classical incisions
    - Mean gestational age in 2nd delivery: 36wks
- Inability to see or hold baby
- Painful recovery during difficult time


Effect of Method of Delivery

- No difference in neurodevelopmental outcomes at age 2
- No difference in mortality
- No difference in short-term morbidity

- Reserve CD for obstetric indications


AAP Guide to Counseling

- “In addition, whereas previous publications may have provided specific recommendations based on the anticipated gestational age, this statement emphasizes the limitations of that approach and the need to individualize counseling. “

American Academy of Pediatrics
DEDICATED TO THE HEALTH OF ALL CHILDREN


Limitations of Gestational Age Cutoffs

- Variable and rapid rate of fetal development during the early third trimester
- Inaccuracy of gestational dating
- Other factors
  - Gender
  - Steroids
  - Multiples
  - Birthweight

Components of Counseling

- assessment of risks
- communication of those risks
- ongoing support

What information to give?

- Institutional vs. Local vs. National?
  - Depends on patterns of resuscitation
  - Depends on numbers of babies

- Range rather than specific number

- Written/Visual aides requested by parents
  - Consider literacy levels

NICHD NRN calculator


Hope

- Communicating only negative information perceived as having “given up”

- Lack of optimism leads to mistrust and adversarial relationship

- Acknowledge grief and fear

- Physicians who express emotion more likely to be perceived as compassionate and hopeful

Arnold C, Tyson JE. Semin Perinatal. 2014 2;38(1):2-11

https://neonatal.rti.org


“What would you do”

- Use as bridge to inquire about patient
  - Attitudes
  - Fears
  - Preferences
  - Values
  - Goals

Importance of Team Counseling

- Divergent estimates given on likelihood of survival and disability
- Different definitions of “intact survival”
- Specialists defer to each other on management questions (steroids)

Patient Desires

- Team approach
- Time to think
- Multiple visits
- Expressions of sympathy
- Hope
- Range of numbers
- Ongoing support


Manley BJ et al, Pediatrics. 2010; 125(3).
UCSF Policy

**Resuscitation at limits of viability**

- **>26 weeks** – Universal resuscitation (unless lethal anomaly or other reason not viable)
- **25+0 – 25+6** – Resuscitation is default option, with parental choice for comfort care or resuscitation
- **24+0 – 24+6** – Do not recommend resuscitation. Parental choice for comfort care or resuscitation, based on individual risk factors
- **23+0 – 23+6** – Strong recommendation against resuscitation. Parental choice to be considered IF meets ALL mandatory criteria:

UCSF Criteria for Resuscitation at 23w

**MANDATORY CRITERIA IN ORDER TO BE OFFERED RESUSCITATION AT 23+0 - 23+6**

- [ ] No major congenital anomalies
- [ ] No chorioamnionitis on presentation, clinical diagnosis made by obstetrics team
- [ ] Greater than 24 hours from first dose of BMZ
- [ ] Category 1 or 2 Fetal Heart Rate Tracing; no evidence of category III tracing on presentation
- [ ] No prior or current laminaria placement

**RELATIVE CONTRAINDICATIONS TO RESUSCITATION AT 23 0/7 – 23 6/7, unless otherwise specified**

- [ ] Multiple gestation pregnancy
- [ ] IUGR (<10th percentile)
- [ ] Unexplained or prolonged oligohydramnios

Counseling Team

- Pregnant patient, with partner, intended parent(s) or other anticipated guardian, if applicable
- MFM Fellow, and/or MFM or OB attending (or Chief OB resident)
- Neonatology Fellow and/or Attending
- L&D bedside RN
- ICN triage RN
- Social worker, as available

Talking Points

- Use name and gender of baby
- Details vs. Big Picture
- NEJM Survival Stats
- Obstetric options
- Neonatal options
- Hospital Course
Next Steps

- Northern California Periviability Collaborative
- Data collection
- Individualize decision-making

Thank you!!

References


References, Cont’d