Which Patients Need an Anesthesia Consult Before Labor?

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Primary Questions

- What are the potential benefits of an antepartum anesthesia consult?
- Which patients are considered “High Risk”?
...The chart says the patient has HHT...What's that?

...Is that a pacemaker?  
...Oh that, its just an ICD

...I don't think I have any bleeding problem,  
...but my mother has von something...
**OUTLIERS**

1. Something that is situated away from or classed differently from a main or related body
2. A statistical observation that is markedly different in value from the others of the sample

- “Outlier” is a term used to describe things, people, or phenomenon that lie outside of normal experience.
- This book is concerned with people who are outliers in terms of success.

Malcom Gladwell

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### Pregnancy Mortality Surveillance System


From detailed chart reviews of maternal deaths (CA-Pregnancy Associated Mortality Review Committee; CDPH-MCAH)


The recognition and management of severe, acute illness in a pregnant woman requires multidisciplinary teamwork. An anaesthetist and/or critical-care specialist should be involved early.

“Careful clinical planning and management may decrease the likelihood of high-risk obstetric patients developing life-threatening conditions and severe maternal morbidity or mortality.”
**Practice Guidelines for Obstetric Anesthesia**

*An Updated Report by the American Society of Anesthesiologists Task Force on Obstetric Anesthesia and the Society for Obstetric Anesthesia and Perinatology*  
Anesthesiology. 2016; 124(2): 1-31

- Recognition of significant anesthetic or obstetric risk factors should encourage consultation between the obstetrician and the anesthesiologist
- A communication system should be in place to encourage early and ongoing contact between obstetric providers, anesthesiologists, and other members of the multidisciplinary team

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**Why in the antepartum period?**

- Timely input from senior specialists
- Further studies may be required
- Need for additional subspecialists
- Coordination of labor care
- Discussion of options / special needs
- Potential need for transfer

A. Butwick et al. IJOA 2007; 16:311

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**Other Potential Benefits?**

- Decrease complications
- Improve efficiency / limit delays
- Improve patient communication
- Improve patient satisfaction
- Useful teaching opportunity for patients
- Closer specialty working relationship

A. Butwick et al. IJOA 2007; 16:311
What is the Best Model?

- High Risk Clinic?
- Scheduled time in triage?
- Phone consult?
- Page anesthesiologist on call?
- While patient in labor?

What warrants a consult?

What warrants a consult?
**Cardiovascular Disease:**
- Congestive Heart Failure
- Myocardial ischemic disease
- Cardiomyopathy
- History of cardiac arrhythmia
- Valvular Heart Disease
  - Moderate or Severe Aortic Stenosis
  - Moderate or Severe Mitral Regurg
  - Pulmonary Stenosis

**Cardiovascular Disease (continued):**
- Presence of pacemaker or ICD
- H/O Congenital Heart Defect
- Pulmonary Hypertension
- Aortic Aneurysm
- Prior Cardiac Surgery

**Respiratory Disease**
- Asthma requiring daily medications or Hx of hospitalization in past year
- Interstitial lung disease
- Cystic Fibrosis
- Pulmonary Fibrosis
- Need for home oxygen
- Pulmonary Hypertension

**Hematologic Disease**
- VonWillebrand's
- Thrombocytopenia (<100K)
- Hemophilia
- ITP
- Hemoglobinopathy
- Other coagulopathy
- Currently on anticoagulation
Neurologic/ Musculoskeletal

- History of Stroke
- Scoliosis or other spinal deformity or disease
- Prior Spine or Brain Surgery
- Chiari Malformation
- Multiple Sclerosis
- Myasthenia Gravis
- Neurofibromatosis
- Elevated ICP or presence of LP shunt
- Neurovascular aneurysm / AV malformation

Obstetric Considerations:

- Triplets or greater multiple gestations
- BMI greater than 45
- Planned EXIT procedure
- Suspected Accreta / Percreta
- Need for Non-Obstetric Surgery

Anesthesia Considerations:

- Previous problems with difficult airway
- Previous problems with malignant hyperthermia
- Previous problems with epidurals or spinals

Other

- Sleep Apnea
- Prior severe drug reactions / allergies
- Chronic Pain
- Current Cancer
- Liver Cirrhosis
- Severe endocrine disease
- Autoimmune SLE
- Age > 50
- Any patient with significant concerns
- Refuses of blood transfusion
- Learning difficulties or inability to consent
- Any patient deemed “High Risk” by Obstetrician
Table: Summary of consultations seen by primary indication

<table>
<thead>
<tr>
<th>Primary Condition</th>
<th>2001 (n = 618)</th>
<th>2006 (n = 428)</th>
<th>2011 (n = 922)</th>
<th>Total (n = 1,968)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cardiac</td>
<td>75</td>
<td>91</td>
<td>102</td>
<td>268</td>
</tr>
<tr>
<td>Musculoskeletal</td>
<td>80</td>
<td>52</td>
<td>78</td>
<td>210</td>
</tr>
<tr>
<td>Hematologic</td>
<td>58</td>
<td>56</td>
<td>69</td>
<td>183</td>
</tr>
<tr>
<td>Brain/Spinal Cord</td>
<td>37</td>
<td>40</td>
<td>49</td>
<td>128</td>
</tr>
<tr>
<td>Gastrointestinal</td>
<td>15</td>
<td>35</td>
<td>72</td>
<td>120</td>
</tr>
<tr>
<td>Autoimmune</td>
<td>19</td>
<td>26</td>
<td>31</td>
<td>76</td>
</tr>
<tr>
<td>Previous Anesthetic</td>
<td>25</td>
<td>19</td>
<td>32</td>
<td>76</td>
</tr>
</tbody>
</table>

SUMMARY:

- Early identification & consultation
- Timely investigation
- Prompt request for referrals
- Planned management for both scheduled and emergent delivery
- Involvement of a multi-disciplinary team

Goal to minimize morbidity & mortality

Reasons for referral in the first 1000 mothers referred to the antenatal anaesthetic assessment service at the Chelsea and Westminster Hospital

<table>
<thead>
<tr>
<th>Category</th>
<th>Number (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Musculoskeletal</td>
<td>372 (37.2)</td>
</tr>
<tr>
<td>Cardiac</td>
<td>193 (19.3)</td>
</tr>
<tr>
<td>Haematological</td>
<td>103 (10.3)</td>
</tr>
<tr>
<td>Anaesthetic</td>
<td>95 (9.5)</td>
</tr>
<tr>
<td>Neurological</td>
<td>78 (7.8)</td>
</tr>
<tr>
<td>Respiratory</td>
<td>30 (3.0)</td>
</tr>
<tr>
<td>Drug related</td>
<td>25 (2.5)</td>
</tr>
<tr>
<td>Other</td>
<td>104 (10.4)</td>
</tr>
</tbody>
</table>

SUMMARY:

- Top 3 Referrals:
  - Cardiac
  - Musculoskeletal
  - Hematologic

  .....That leaves 40-50%

- Obesity?