1. INTRODUCTION TO FETAL MEDICINE

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THE FETUS AS A PATIENT

New medical discipline:
- Result of ever-more accurate prenatal diagnosis
- Increasing knowledge of normal and abnormal fetal development
- Increasingly vague distinction between in utero fetus and ‘ex utero’ premature infant:
  
  Premature infant (23 weeks gestation to term) cared for by
  - Neonatologist
  - Geneticist
  - Cardiologist
  - Surgical specialists
  - Pulmonary, renal, specialists

  Fetus (16 weeks gestation to term) may/should benefit from same medical expertise

FETAL MEDICINE v. OBSTETRICS

Definitions:
- Obstetrics:
  - Historically: little known about fetus, hence mother and pregnancy central
- Maternal-Fetal Medicine/Perinatology
  - Treatment of “high-risk pregnancies”
- Fetal medicine
  - Distinction from above specialties still vague
  - Principle: fetus-directed, rather than pregnancy-directed approach
  - Useful definition: multidisciplinary care of the fetus (analogy with newborn, infant)
  - Covers only small number of “high-risk pregnancies”
JUSTIFICATION FOR FETAL MEDICINE AS A SEPARATE DISCIPLINE

Single physician approach (maternal-fetal medicine specialist, perinatologist):
- works well for “simple” conditions, or conditions not requiring multiple consultations
- is difficult for more complex conditions:
  - **Requiring more than one consultant**
    - Conflicting information from different sources → confused MD, parents
    - Consultant informs parents, but not referring physician
  - **Requiring pre- or perinatal treatment/intervention**
    - Lack of coordination for pre- and perinatal management
    - Lack of continuity (postnatal follow-up by pediatrician)
  - **Requiring specific expertise**
    - Difficult for any one specialist to remain up-to-date in all specialties

MULTIDISCIPLINARY APPROACH: THE MADAM CONCEPT

1. Most pregnancies require only **obstetrical follow-up**
2. Small percentage: “High-risk pregnancies”
   - **Maternal-Fetal Medicine specialist (MFM)**
     - Directs management/treatment of pregnancy/fetus
     - May consult with single specialist (urologist, surgeon, geneticist)
     - Responsible for transition to neonate (coordination with neonatologist)
3. A fraction of these require a **multidisciplinary approach**, if:
   - More than one specialty (in addition to MFM) is involved with the care of the fetus
   - Consultation will likely lead to alteration in fetal management (intervention)
   - Consultation will likely lead to alteration in protocol or policy (for subsequent cases)

Multidisciplinary Antenatal Diagnosis And Management (MADAM) conference:
- Unique to Brown, but many similar models exist
- Acts as a “tumor board”
- Reviews case, reviews pertinent literature, consults with local experts
- Forms consensus, suggests intervention/specific management
- Parents and referring MD receive **unified** opinion
- Ethics board for novel interventions (e.g. fetal surgery – see chapter 12)