Learn simply

Advanced Maternal Age

Passion profession same

Confirm the diagnosis of advanced maternal age (AMA)[1]

- Take a detailed history and perform a physical examination[2]
- Be aware of the risks of AMA[3]

Subsequent management depends on gestational age

1st trimester

- Early ultrasound to document gestational age, confirm fetal viability, exclude twins
- Routine pregnancy laboratory tests at the first prenatal visit

Offer definitive aneuploidy testing[4]

Accepted

Declined

Offer aneuploidy screening (cell free fetal DNA or first trimester risk assessment at 11–14 weeks and/or "quadruple serum analyte screening" at 15–20 weeks)[5]

If positive, recommend formal genetic counseling and definitive aneuploidy testing (CVS or amniocentesis)

2nd trimester

- **Fetal anatomic survey at 18–22 weeks**
- Recommend fetal echo if indicated
- Offer maternal serum-alpha fetoprotein (MS-AFP) for neural tube defect screening at 15–20 weeks
- Consider early GLT screening for GDM
- Consider formal genetic counseling

Offer definitive aneuploidy testing[4]

Accepted

3rd trimester

- Serial fetal growth scans q 3–4 weeks starting at viability (24 weeks)
- Daily fetal kick counts >32 weeks
- Anesthesia consultation if significant co-morbidities are present

Consider antepartum fetal testing at term[6]

Recommend elective induction at 39–40 weeks[7]

1. Advanced maternal age (AMA) refers to a woman who is age 35 or older on her estimated date of delivery. Over the last 30 years, there has been a 30% increase in first births among women aged 35–39 years in the USA and an even higher increase (70%) among women aged 40–45 years. This change in maternal demographics poses new challenges for prenatal care.

2. It is not clear whether the entity of "advanced paternal age" exists, although there is evidence to suggest that pregnancies fathered by men over 65 years of age are at increased risk of autosomal dominant genetic disorders (such as achondroplasia) and autism.

3. Confirm maternal age. Obtain further details about the timing and mode of conception. For example, if the pregnancy is the result of in vitro fertilization with donor oocytes, then the risks of fetal aneuploidy are related to the "age" of the oocytes (i.e., the age of the donor) and not the age of the woman carrying the pregnancy. Physical examination should be focused on identifying underlying co-morbid medical conditions.

1. AMA has long been known to be a risk factor for fetal aneuploidy, including trisomy 21 (Down syndrome), trisomy 13, and trisomy 18. In this regard, there is nothing magical about age 35 at delivery.

2. The risk of fetal aneuploidy does not jump up after that date, but increases exponentially with advancing maternal age.

3. The reason that age 35 at delivery was chosen to define AMA, is that the risk of identifying a fetal aneuploidy by the 2nd trimester genetic amniocentesis at that maternal age is approximately equal to the procedure-related pregnancy loss rate of amniocentesis (originally estimated at 1 in 270).

4. In addition to the risk of fetal aneuploidy, AMA is also an independent risk factor for other adverse pregnancy events, including higher rates of spontaneous abortion, spontaneous preterm birth, gestational diabetes mellitus (GDM), gestational hypertension/preeclampsia, placenta previa, intrauterine growth restriction (IUGR), and stillbirth/intrauterine fetal death (IUFD).

5. Other maternal complications include an increased risk of cesarean delivery and postpartum hemorrhage. The reason for these increased risks is not clear, although some of these complications can be attributed to the higher incidence of maternal medical disorders with advancing age. The risks of AMA should be reviewed with the couple at their first prenatal visit.

1. In the 1st trimester, chorionic villous sampling (CVS) can be offered for karyotype analysis at 11–14 weeks' gestation.
2. Early amniocentesis (<15 weeks) is associated with increased pregnancy loss and is therefore not recommended. After 15 weeks, ultrasound-guided amniocentesis can be performed and amniocytes isolated for karyotype analysis. The procedure-related pregnancy loss rate for both of these procedures is estimated at 1 in 400.

3. The role of routine antenatal fetal testing in pregnancies complicated by AMA in the absence of another obstetric indication (such as hypertension or IUGR) is not clear.

4. Although there are no clear guidelines, some authorities would recommend weekly non-stress testing (NST) with an assessment of amniotic fluid volume (BPP or AFI) starting at 37–38 weeks.

5. Elective induction of labor should be offered to all AMA women at or after 39 weeks' gestation with or without cervical ripening. If the patient declines, continued expectant management with fetal testing is appropriate with induction at 40 weeks, but no later than 41 weeks.