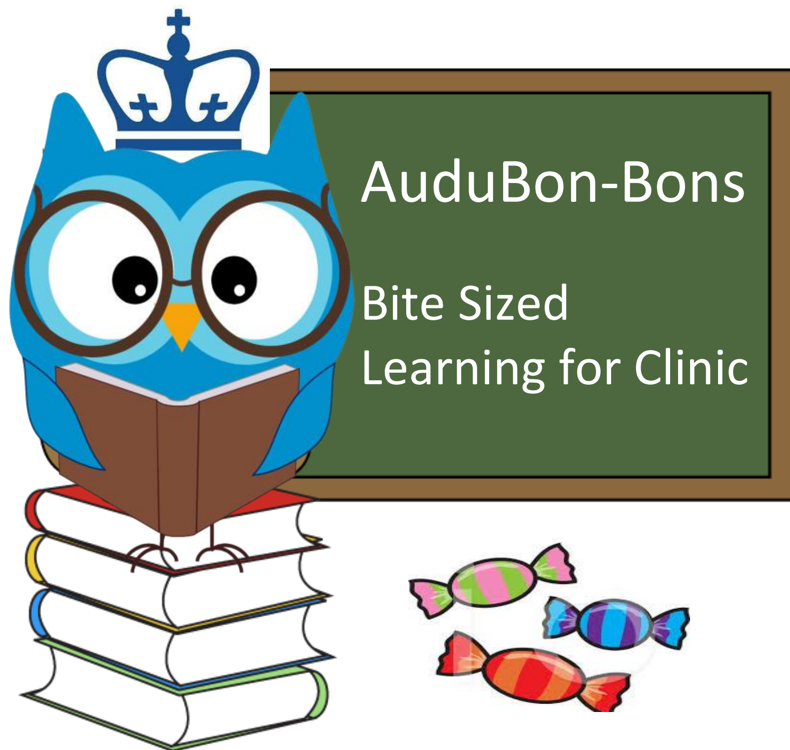
MULTIFETAL GESTATION – DCDA TWINS

Week 33



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Homework Assignment:
SASGOG Pearls of Excellence: Antepartum Management of Dichorionic/Diamniotic Twins
https://www.exxcellence.org/list-of-pearls/antepartum-management-of-dichorionicdiamniotic-twins/

LEARNING OBJECTIVES

- To review how multifetal gestation is diagnosed and classified
- To understand the maternal and fetal impacts of a DCDA twin gestation
- To be comfortable managing the antenatal care of a patient with a DCDA twin gestation
- To review the recommendations regarding timing and route of delivery for a DCDA twin gestation

CASE VIGNETTE

- A 42y G2P0010 woman at 11 weeks EGA by LMP presents for new prenatal care visit. She reports frequent nausea and vomiting, and has only been able to tolerate fluids and occasionally crackers. She has no other complaints.

- She was seen in the ED at an outside hospital one month ago for spotting. She had blood drawn, but ended up leaving before the ultrasound was done because she had been waiting several hours. She got a call from the ED advising her to follow up because her pregnancy hormone level was unusually high, but decided to wait until this appointment.

FOCUSED HISTORY

What elements of this patient's history are most relevant?

- POBH: **1 sab (managed with D&C for r/o molar pregnancy)**
- PGYN: **Irregular menses**; No STI/Cysts/Fibroids; No abnormal paps
- PMH: Denies
- PSH: **D&C x 1**
- Meds: PNV
- All: NKDA
- Soc: No toxic habits; Lives with her husband; Accepts blood products
- FHx: No hx gyn cancers; No hx DM or HTN; **No hx twins**

PERTINENT PHYSICAL EXAM FINDINGS

What elements of the patient's physical exam are most important?

- VS: P 76 **BP 118/72** Wgt: 65kg Hgt: 160cm BMI: 25
- Cor: Regular rhythm, no M
- Pulm: CTAB b/l
- Abd: Soft, NT/ND, +BS x 4Q
- Pelvic: Vulva: Normal external female genitalia; No lesions

  Vagina: Healthy-appearing mucosa, No discharge

  Cervix: Parous os; L/C/P

  Uterus: NT, ~12-14wk size, anteverted

  Adnexae: No mass/tenderness b/l
- Ext: No calf tenderness b/l; no edema b/l; +1 DTR b/l

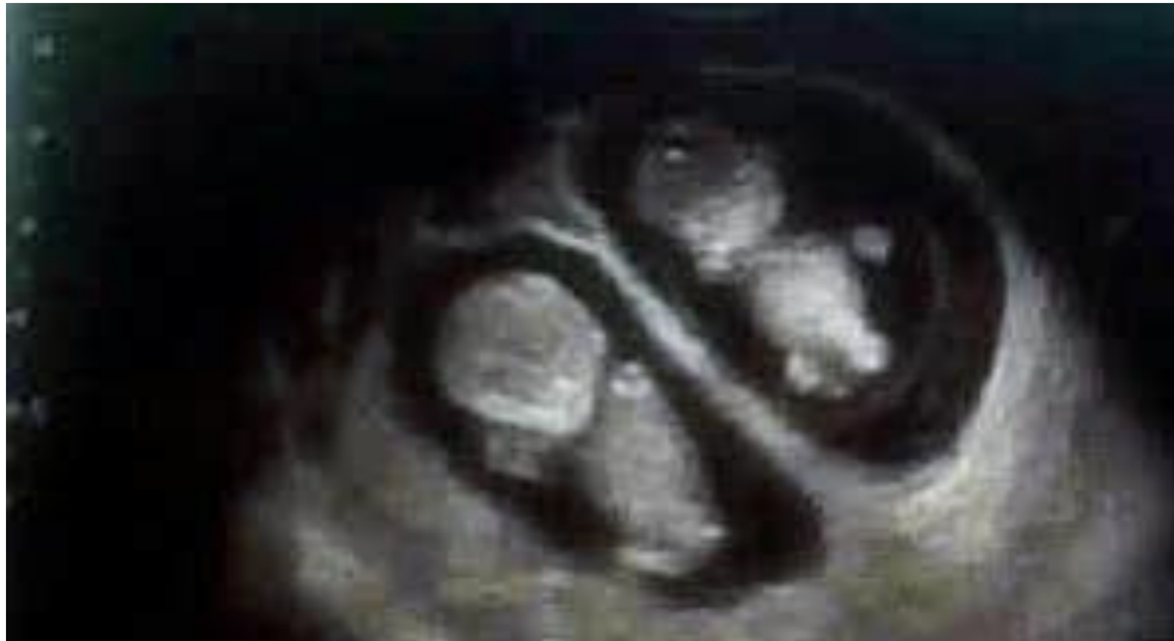
DIFFERENTIAL DIAGNOSIS

What is your differential diagnosis?

- Multifetal gestation
- Molar pregnancy

ULTRASOUND

You do a bedside ultrasound and see this image. What is your diagnosis?

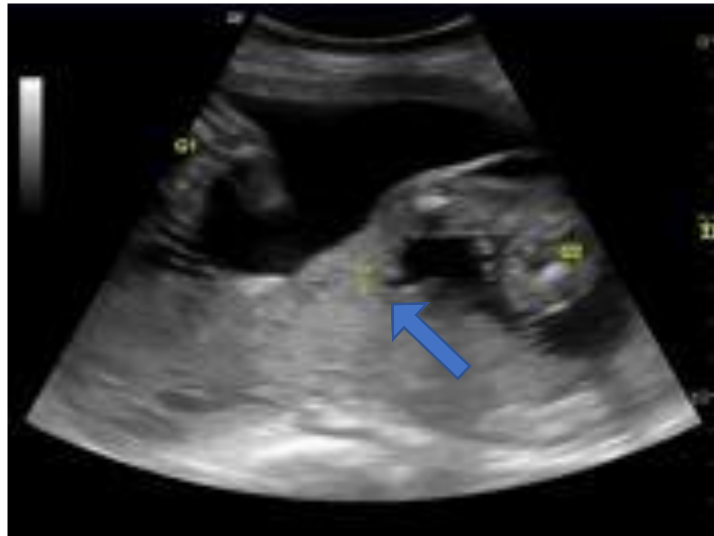


- Dichorionic-Diamniotic twin gestation

DIAGNOSIS

What is the best ultrasonographic characteristic to diagnose a dichorionic gestation?

- Twin peak sign (also called lambda or delta sign)



Can you see the triangular projection of tissue with placenta-like echogenicity extending beyond the chorionic surface of the placentae?

DIAGNOSIS

What is the optimal time for accurate assessment of chorionicity?

- **Late first** or **early second** trimester

Is chorionicity the same as zygosity?

- No

25-30% of monozygous twins are DCDA gestations

CLASSIFICATIONS

What parameters are used to classify multifetal gestations?

- **Placenta(s)**
- **Amniotic sac(s)**

What are these classifications?

Placenta	Amniotic sac(s)	Designation
2	2	Dichorionic-diamniotic (DCDA)
1	2	Monochorionic-diamniotic (MCDA)
1	1	Monochorionic-monoamniotic (MCMA)

PREDISPOSING FACTORS

What factors are associated with an increased likelihood of twin gestation?

- Prior history of multifetal gestation
- Family history
- Advanced maternal age
- Assisted reproductive technology

IMPACT ON PREGNANCY

Which maternal and fetal outcomes are more likely to occur with a DCDA twin gestation?

- Hyperemesis
- Preeclampsia
- Gestational diabetes
- Preterm birth
- Cesarean delivery
- Postpartum hemorrhage
- Congenital anomalies
- Acute fatty livery of pregnancy
- Postpartum depression

ANTENATAL CARE – ANEUPLOIDY SCREENING

What method of aneuploidy screening allows each fetus to be screened independently in a multifetal gestation?

- Nuchal Translucency

What percentage of Down Syndrome pregnancies are identified in twin gestations using a traditional First Trimester Screen?

- 75 – 85%

Is NIPT currently recommended in women with multifetal gestation?

- No (limited evidence to recommend use with multifetal gestations)

ANTENATAL CARE - MEDICATION

In addition to routine prenatal vitamins and iron, are there any other medications you would recommend for patients with multifetal gestation?

- Low dose ASA

Table 1. Clinical Risk Assessment for Preeclampsia*

Risk Level	Risk Factors	Recommendation
High†	• History of preeclampsia, especially when accompanied by an adverse outcome • Multifetal gestation • Chronic hypertension • Type 1 or 2 diabetes • Renal disease • Autoimmune disease (systemic lupus erythematosus, antiphospholipid syndrome)	Recommend low-dose aspirin if the patient has one or more of these high-risk factors
Moderate‡	• Nulliparity • Obesity (body mass index greater than 30) • Family history of preeclampsia (mother or sister) • Sociodemographic characteristics (African American race, low socioeconomic status) • Age 35 years or older • Personal history factors (eg, low birthweight or small for gestational age, previous adverse pregnancy outcome, more than 10-year pregnancy interval)	Consider low-dose aspirin if the patient has more than one of these moderate-risk factors§
Low	• Previous uncomplicated full-term delivery	Do not recommend low-dose aspirin

*Includes only risk factors that can be obtained from the patient's medical history. Clinical measures, such as uterine artery Doppler ultrasonography, are not included.

†Single risk factors that are consistently associated with the greatest risk of preeclampsia. The preeclampsia incidence rate would be approximately 8% or more in a pregnant woman with one or more of these risk factors.

‡A combination of multiple moderate-risk factors may be used by clinicians to identify women at high risk of preeclampsia. These risk factors are independently associated with moderate risk of preeclampsia, some more consistently than others.

§Moderate-risk factors vary in their association with increased risk of preeclampsia.

Modified from LeFevre, ML. U.S. Preventive Services Task Force. Low-dose aspirin use for the prevention of morbidity and mortality from preeclampsia: U.S. Preventive Services Task Force Recommendation Statement. Ann Intern Med 2014;161:819–26.

The occurrence of hypertensive complications with twin gestations is nearly double that of singletons

ANTENATAL SURVEILLANCE

What is the recommended ultrasound schedule for DCDA twin gestations after a scan at 18-22 weeks to evaluate fetal anatomy, amniotic fluid, placentae, & growth?

- **Growth** scan **every 4 weeks** (in the absence of growth restriction or other pregnancy complications)
- **Weekly** antenatal fetal surveillance starting at **36 weeks**

- There are **no evidence-based recommendations** on the frequency of fetal growth scans **after 20 weeks** of gestation; however it seems **reasonable** that serial u/s be performed **every 4-6 weeks**
- **Antenatal fetal surveillance** generally is reserved for women with DCDA twin gestations **complicated by maternal/fetal disorders** requiring antepartum testing

DELIVERY PLANNING

At what gestational age should patients with uncomplicated DCDA twin gestations undergo delivery?

- **38 weeks**

What is the optimal route of delivery in patients with a diamniotic twin gestation with presenting fetus in a vertex position?

- **Vaginal**
    - What is the earliest gestational age beyond which this is a reasonable option to be considered?
        - **32 weeks**

Can a patient with one prior LTCS safely consider TOLAC?

- Yes (if an otherwise appropriate candidate for twin vaginal delivery)

SOCIAL DETERMINANTS OF HEALTH

2017 UNC Chapel Hill

Study showed that non-Hispanic black women carrying twins have an elevated risk for preterm birth and earlier delivery compared to non-Hispanic white women.

The study also noted that while preterm birth disparities for singleton pregnancies have been well-characterized, the relationship in twin pregnancies is understudied

- Efforts must be made to improve access and early entry into prenatal care.
- There needs to be a stronger focus on studying health-care disparities associated with race beyond the scope of singleton pregnancies to allow for more targeted efforts to close such gaps.

EPIC .PHRASE

BBonDCDAcounseling

Description: DCDA plan and counseling

The patient was counseled on her diagnosis of a dichorionic-diamniotic twin pregnancy. It was explained in plain language that this means there is a placenta and amniotic sac individual to each fetus. She was advised that delivery will be planned for 38 weeks gestation. The following was discussed regarding prenatal management, including plans for ultrasound and delivery.

[] ASA 81 mg daily (initiate between 12-28w, optimally start <16w)
[] Fetal growths q4 wks starting at 24 wks
[] Serial cervical lengths from 16-24w q2w
[] Weekly testing after 36 wks
[] MOD counseling, including risks of breech extraction, combined delivery
[] Delivery between 38 to 38+6 wks
[] Delivery at CHONY

CODING AND BILLING

- <u>O30.90</u> Multiple gestation, unspecified, unspecified TM
- <u>O30.009</u> Twin pregnancy, unsp number placenta & sacs, unsp TM
- <u>O30.041</u> Twin pregnancy, dichorionic/diamniotic, first trimester
- <u>O30.042</u> Twin pregnancy, dichorionic/diamniotic, second trimester
- <u>O30.043</u> Twin pregnancy, dichorionic/diamniotic, third trimester
- <u>O30.049</u> Twin pregnancy, dichorionic/diamniotic, unsp trimester

EVIDENCE

- References

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