

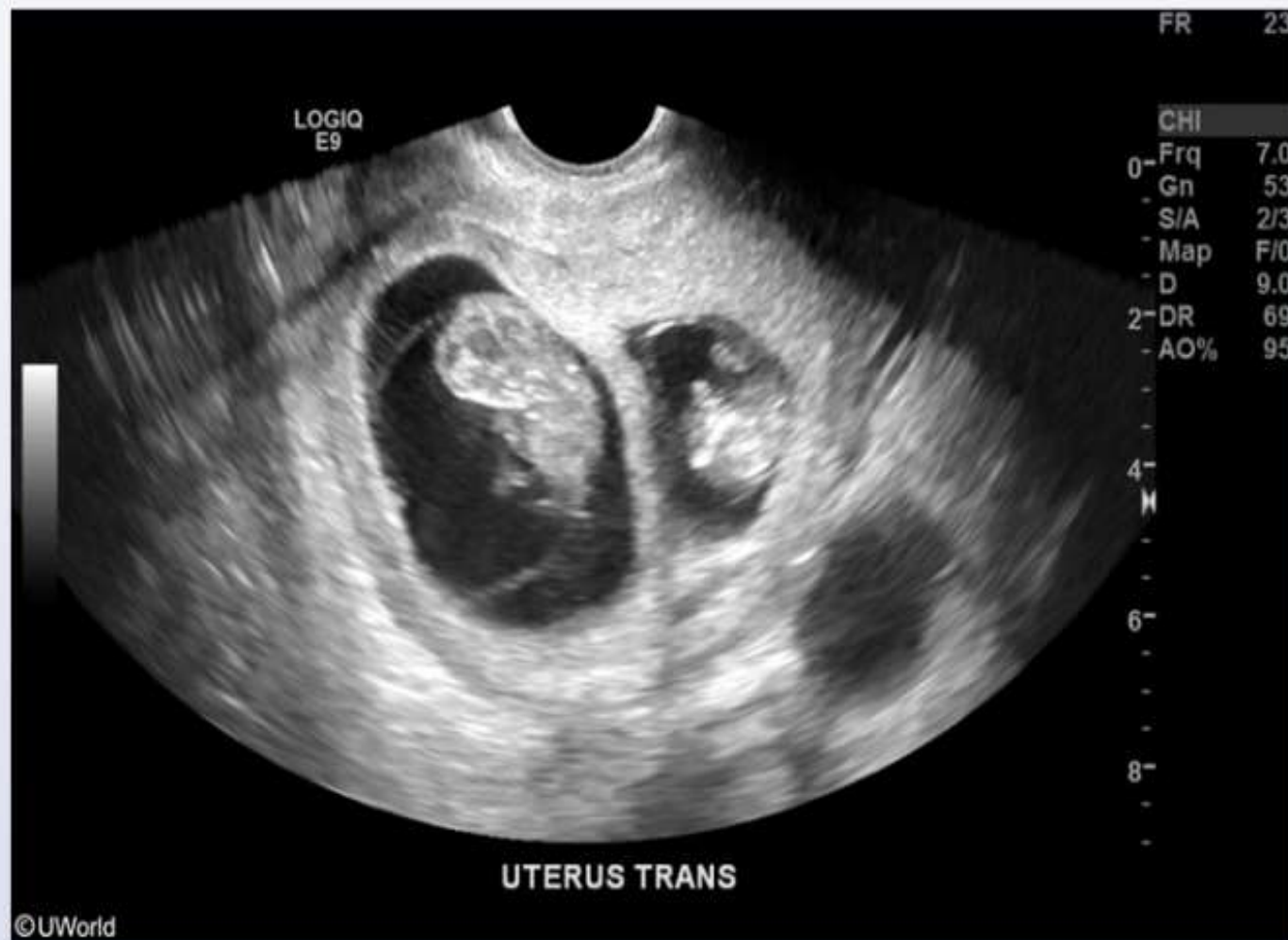
Multiple Gestation

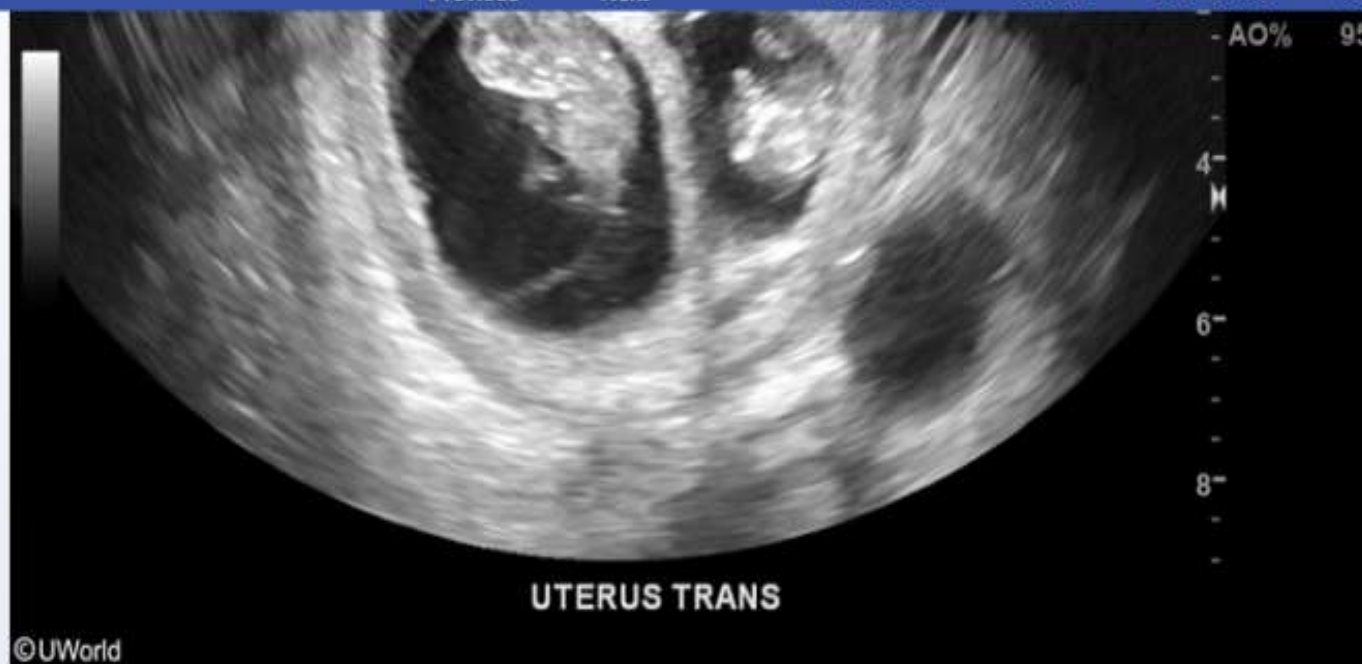
Topic- based Uworld Questions

Block 1, 2, 7, 8



A 39-year-old primigravid woman at 7 weeks gestation comes to the emergency department for vaginal bleeding. She has had dark brown vaginal spotting and mild uterine cramping for the past day. The patient has felt extreme fatigue and has had daily nausea and vomiting for the past week. Blood pressure is 112/68 mm Hg and pulse is 86/min. The abdomen is soft and without rebound or guarding. On pelvic examination, there is scant dark blood in the vagina, and the cervix is visually closed. Pelvic ultrasound is shown in the image below:





Which of the following is the most likely diagnosis in this patient?

- A. Anembryonic gestation
- B. Complete hydatidiform mole
- C. Incomplete spontaneous abortion
- D. Normal singleton gestation with fibroid
- E. Twin gestation



Which of the following is the most likely diagnosis in this patient?

- A. Anembryonic gestation (1%)
- B. Complete hydatidiform mole (1%)
- C. Incomplete spontaneous abortion (3%)
- D. Normal singleton gestation with fibroid (5%)
- E. Twin gestation (88%)

Omitted

Correct answer



88%

Answered correctly



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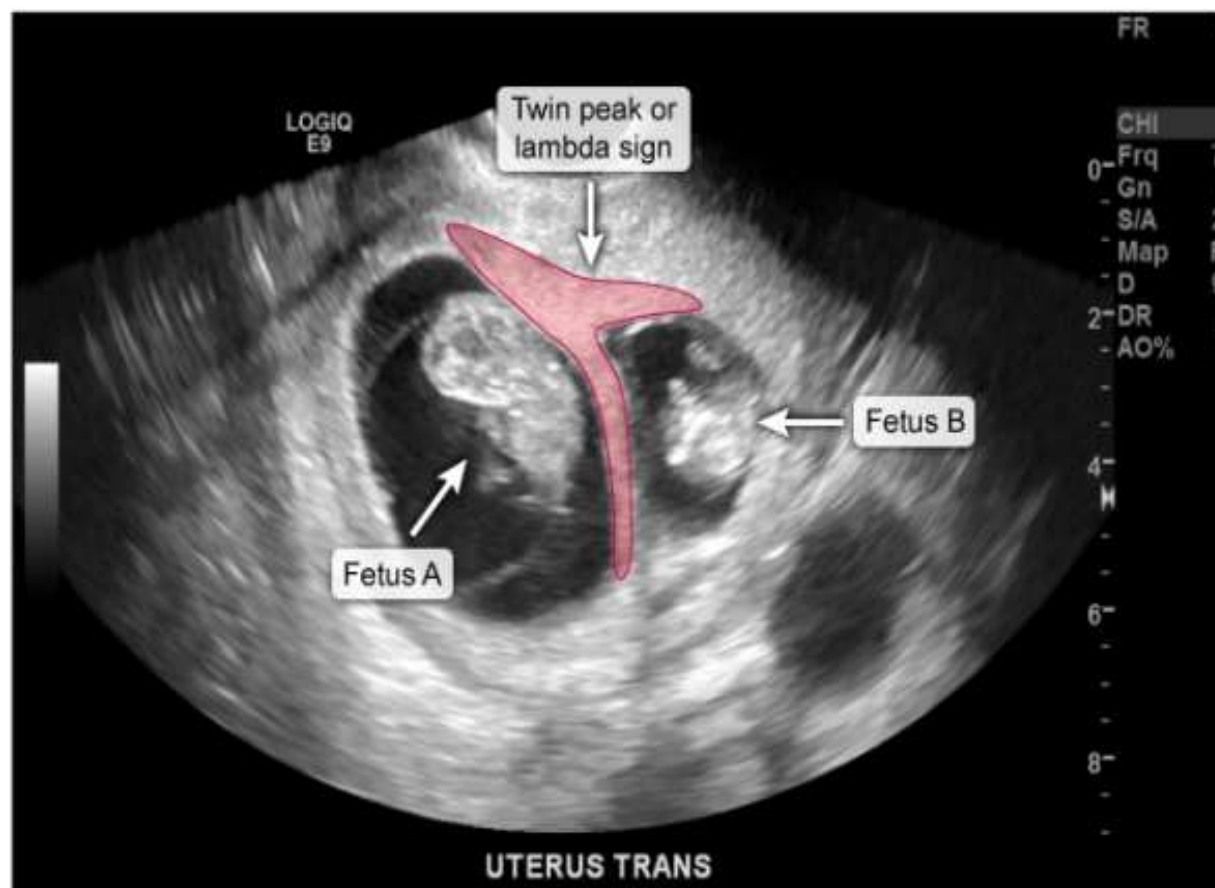
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06/04/2020

Last Updated

Dichorionic-diamniotic twin gestation with twin peak/lambda sign



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Vaginal spotting and mild abdominal cramping are common during the first trimester and are usually benign in patients with a closed cervix and an intrauterine gestation on fetal ultrasound. This patient has 2 intrauterine gestations, or a **twin pregnancy**, on ultrasound. Risk factors for twin gestation include increasing maternal age, fertility-enhancing therapies (eg, ovulation induction), increased parity, and family history. Increased first-trimester nausea and vomiting can be early indicators of a twin pregnancy and are likely due to elevated hCG and progesterone levels.

Twins are classified based on **chorionicity** (number of placentas) and **amniocity** (number of amniotic sacs); this is best assessed during the

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Twins are classified based on **chorionicity** (number of placentas) and **amnioticity** (number of amniotic sacs); this is best assessed during the first trimester.

- Monochorionic-monoamniotic twins (ie, 1 placenta and 1 amniotic sac) are diagnosed by a lack of a dividing intertwin membrane.
- Monochorionic-diamniotic twins (ie, 1 placenta and 2 amniotic sacs) are diagnosed by a **T sign**, which occurs when both amnion layers meet at the shared placenta at a 90-degree angle.
- Dichorionic-diamniotic gestations (ie, 2 placentas and 2 amniotic sacs) present as either 2 visually separate placentas or the appearance of a fused placenta identified by a thick, intertwin membrane and a placental projection where the intertwin membrane meets the placenta (ie, **lambda sign**).

This patient has a **dichorionic-diamniotic twin pregnancy** with a lambda sign. Dichorionic-diamniotic twins are the most common twin gestation and have the fewest pregnancy complications of the twin gestation types.

(Choice A) An anembryonic gestation, a pregnancy with no embryonic development, can present with vaginal spotting. Ultrasound typically reveals an **empty gestational sac** (ie, gestational sac ≥ 25 mm with no embryo or yolk sac).

(Choice B) A complete hydatidiform mole classically presents with a Swiss-cheese or snowstorm appearance on ultrasound rather than with 2 fetuses.

(Choice C) An incomplete spontaneous abortion presents with vaginal bleeding and cervical dilation with visible products of conception at the cervix or vagina. This patient's cervix is closed.

(Choice D) An ultrasound of a normal singleton gestation with fibroid would reveal a single embryo and a separate, well-circumscribed, hypoechoic mass with shadowing, which is not seen on this patient's ultrasound.

at the shared placenta at a 90-degree angle.

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Educational objective:

Dichorionic-diamniotic twin pregnancies are identified on ultrasound with 2 intrauterine gestations, 2 placentas, and 2 amniotic sacs.

References

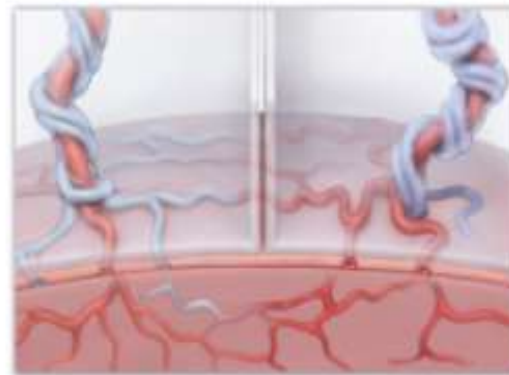
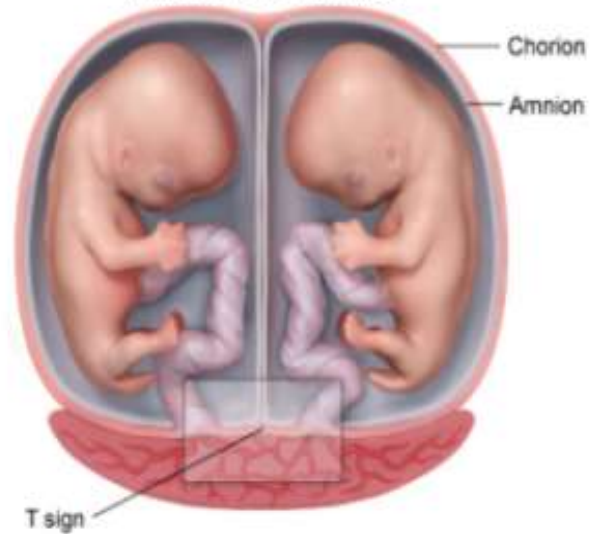
- [Ultrasound surveillance in twin pregnancy: an update for practitioners.](#)
- [Role of ultrasonography in the management of twin gestation.](#)

Exhibit Display



T sign for twins

Monochorionic diamniotic

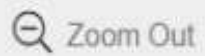


Single placenta

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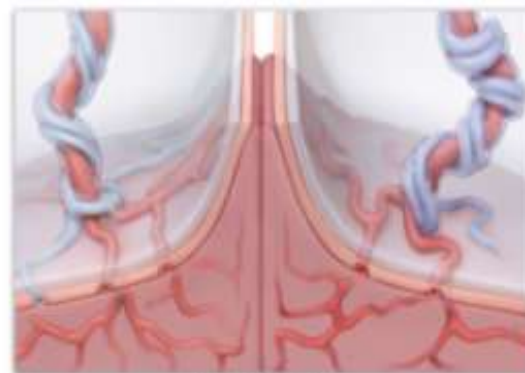
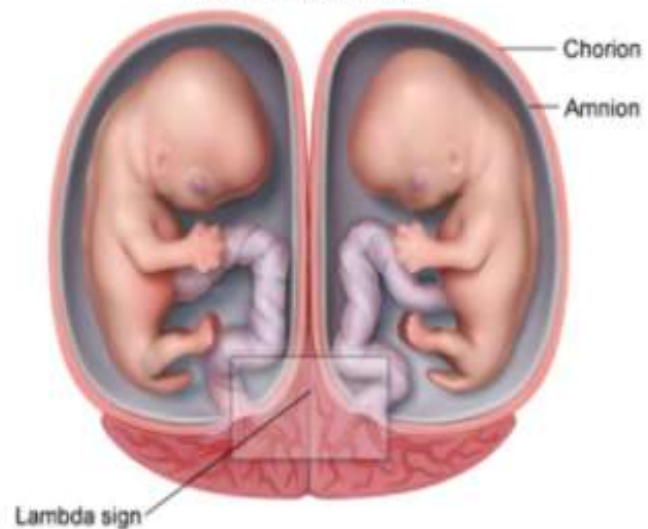
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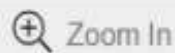


Lambda sign for twins

Dichorionic diamniotic



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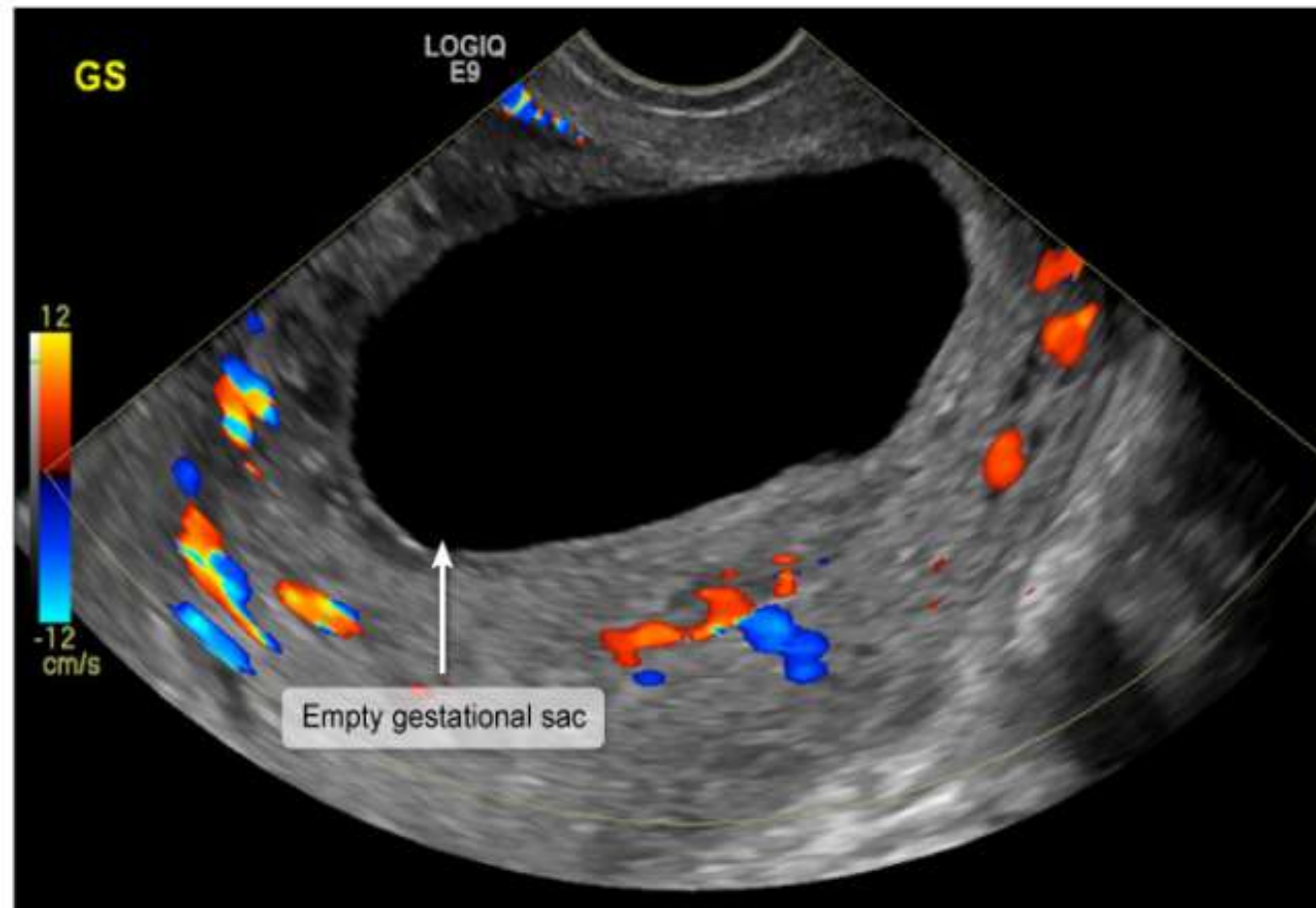
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(Choice C) An incomplete spontaneous abortion presents with vaginal bleeding and cervical dilation with visible products of conception at the

at the shared placenta at a 90-degree angle.

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Anembryonic gestation/blighted ovum/pregnancy failure



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A 37-year-old woman, gravida 2 para 0 aborta 1, at 8 weeks gestation comes to the emergency department due to 2 days of light vaginal spotting and mild abdominal cramping. She has not passed large clots or had heavy bleeding. The patient has infertility issues and this pregnancy resulted from an ovulation induction. Her only prior pregnancy was an ectopic pregnancy 10 years ago that was treated with methotrexate. She has no other medical conditions. The patient takes a daily prenatal vitamin and does not use tobacco, alcohol, or illicit drugs. Blood pressure is 116/64 mm Hg and pulse is 76/min. BMI is 26 kg/m². Speculum examination shows a closed cervix and scant blood in the vagina. Bimanual examination reveals a 10-week-sized nontender uterus and no adnexal masses or tenderness. Two 8-week intrauterine gestations with normal heartbeats are seen on ultrasound. There is a single placenta and no dividing intertwin membrane. Which of the following is the most likely diagnosis in this patient?

- A. Dichorionic diamniotic twins
- B. Heterotopic pregnancy
- C. Inevitable abortion
- D. Monochorionic diamniotic twins
- E. Monochorionic monoamniotic twins

Submit

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- A. Dichorionic diamniotic twins (0%)
- B. Heterotopic pregnancy (0%)
- C. Inevitable abortion (0%)
- D. Monochorionic diamniotic twins (4%)
- E. Monochorionic monoamniotic twins (93%)

Omitted

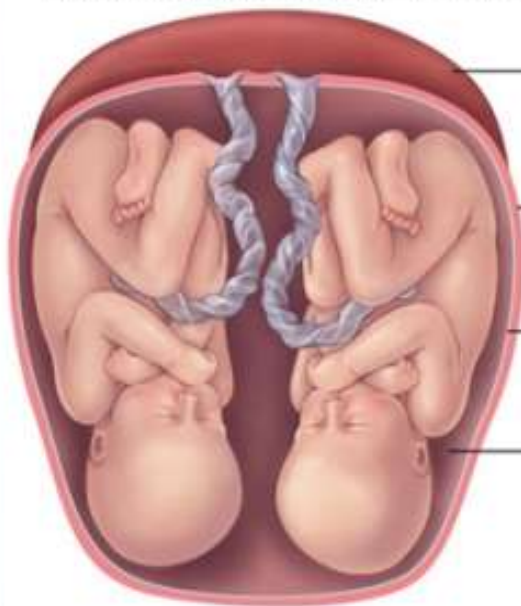
Correct answer
E93%
Answered correctly02 secs
Time Spent04/11/2020
Last Updated

Explanation

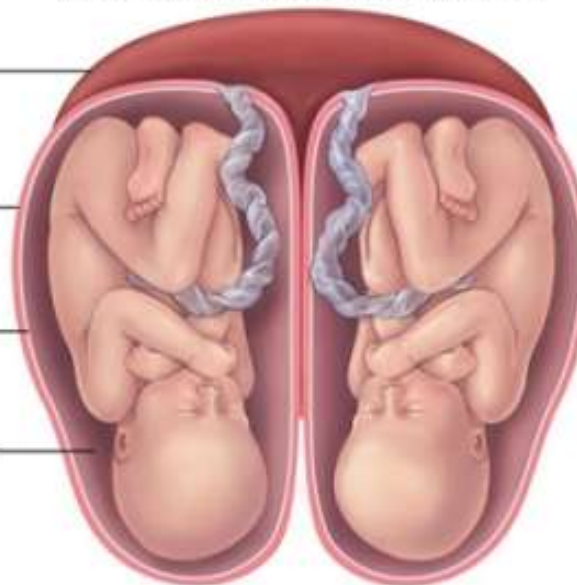
Various types of twin placentation

Various types of twin placentation

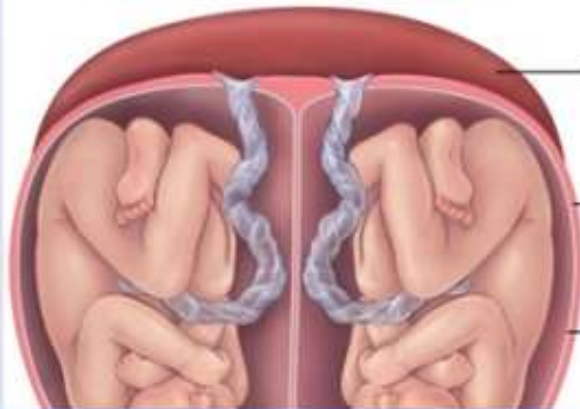
Monochorionic monoamniotic



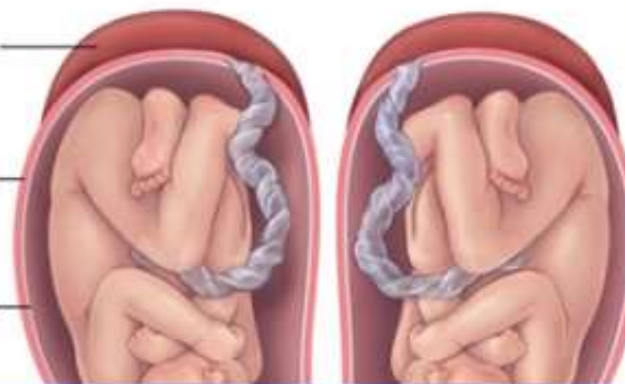
Dichorionic diamniotic (fused)



Monochorionic diamniotic



Dichorionic diamniotic



Vaginal spotting and mild abdominal cramping are common during the first trimester and normal in patients with a closed cervix and a viable intrauterine gestation. This patient has 2 viable intrauterine gestations, or **twin pregnancy**. Twin pregnancies are classified based on chorionicity (number of placentas) and amnionicity (number of amniotic sacs); this is best assessed during the first trimester, as the imaging is not obscured by the growing fetuses and resultant overcrowding. Management of twins is dependent on chorionicity and amnionicity, as complications differ depending upon the classification.

This patient's twin gestation has a **single placenta** and **no dividing intertwin membrane** (ie, single amniotic sac), consistent with **monochorionic monoamniotic twins**. Monochorionic monoamniotic twins are the least common of twin gestations and have the highest pregnancy-related complication rate. In addition to complications that occur in all twins (eg, preterm birth), the single placenta increases the risk of **twin-twin transfusion syndrome** (unbalanced arteriovenous anastomoses), and the single amniotic sac increases the risk for **umbilical cord entanglement** and **intrauterine fetal demise**. Therefore, monochorionic monoamniotic twins are typically managed inpatient beginning at 28 weeks gestation with frequent fetal monitoring (eg, nonstress test) and antenatal corticosteroid administration. Patients are delivered preterm (32-34 weeks gestation) via cesarean delivery.

(Choice A) Dichorionic diamniotic pregnancies have 2 placentas and 2 amniotic sacs. However, due to fetal overcrowding, some dichorionic diamniotic twins develop an obscured intertwin membrane that causes the separate placentas to have a single, fused appearance on ultrasound (similar to monochorionic diamniotic twins). However, dichorionic diamniotic gestations with a "fused" placenta can be identified by a thick intertwin membrane and a placental projection where the intertwin membrane meets the placenta (ie, **lambda-sign**).

(Choice B) A heterotopic pregnancy is the presence of both an intrauterine and an ectopic (ie, extrauterine) pregnancy, which are not seen in this patient.

(Choice C) An inevitable abortion presents with vaginal bleeding and abdominal pain; however, patients also have a dilated cervix, making this diagnosis unlikely.

(Choice D) Monochorionic diamniotic twins have a single placenta and 2 amniotic sacs with a thin intertwin membrane that meets the placenta at a 90-degree angle (ie, **T-sign**).

Educational objective:

depending upon the classification.

This patient's twin gestation has a **single placenta** and **no dividing intertwin membrane** (ie, single amniotic sac), consistent with **monochorionic monoamniotic twins**. Monochorionic monoamniotic twins are the least common of twin gestations and have the highest pregnancy-related complication rate. In addition to complications that occur in all twins (eg, preterm birth), the single placenta increases the risk of **twin-twin transfusion syndrome** (unbalanced arteriovenous anastomoses), and the single amniotic sac increases the risk for **umbilical cord entanglement** and **intrauterine fetal demise**. Therefore, monochorionic monoamniotic twins are typically managed inpatient beginning at 28 weeks gestation with frequent fetal monitoring (eg, nonstress test) and antenatal corticosteroid administration. Patients are delivered preterm (32-34 weeks gestation) via cesarean delivery.

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(Choice B) A heterotopic pregnancy is the presence of both an intrauterine and an ectopic (ie, extrauterine) pregnancy, which are not seen in this patient.

(Choice C) An inevitable abortion presents with vaginal bleeding and abdominal pain; however, patients also have a dilated cervix, making this diagnosis unlikely.

(Choice D) Monochorionic diamniotic twins have a single placenta and 2 amniotic sacs with a thin intertwin membrane that meets the placenta at a 90-degree angle (ie, [T-sign](#)).

Educational objective:

A monochorionic monoamniotic twin pregnancy has a single placenta and no intertwin membrane on ultrasound. Monochorionic monoamniotic twin pregnancies are at risk of cord entanglement and fetal demise; therefore, patients require inpatient monitoring. Delivery typically occurs by 32-34 weeks gestation via cesarean delivery.

References

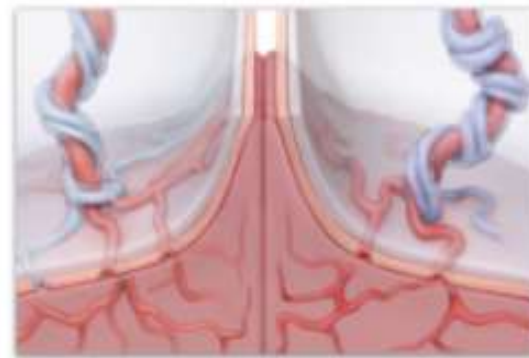
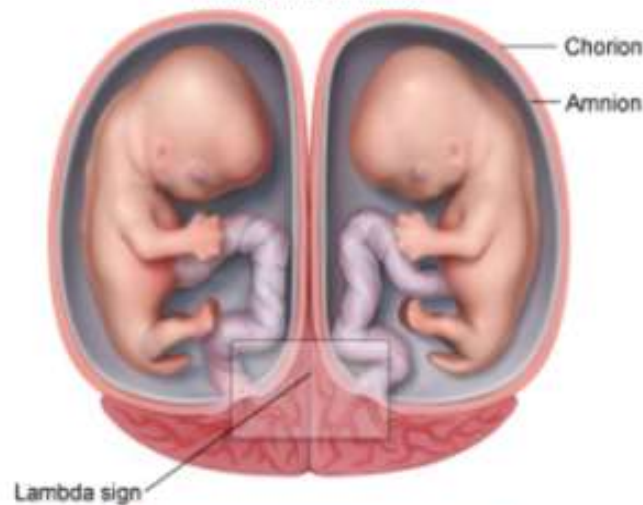
- [Role of ultrasonography in the management of twin gestation.](#)

twin-twin transfusion syndrome (unbalanced arteriovenous anastomoses), and the single amniotic sac increases the risk for umbilical cord entanglement and intrauterine fetal demise. The four chorionic membranes in twin pregnancies increase the risk for placental abruption at 20

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Lambda sign for twins

Dichorionic diamniotic



Two placentas

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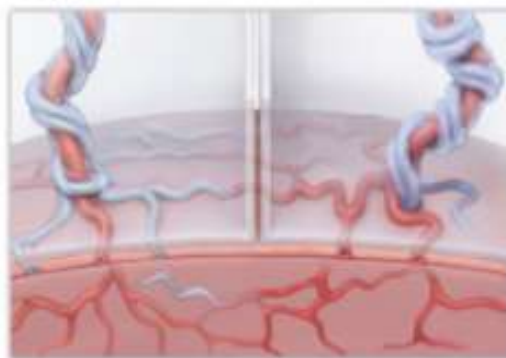
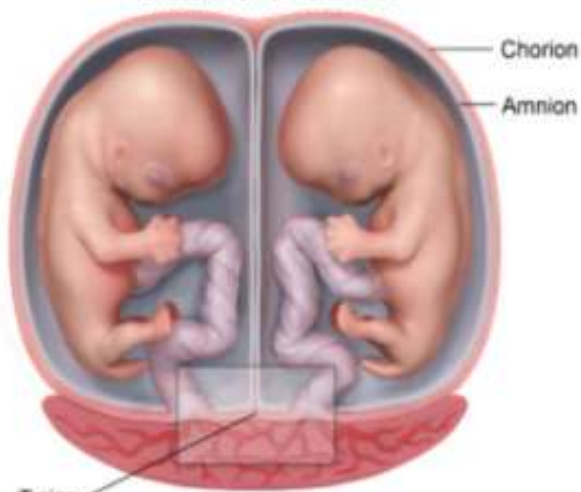
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twin-twin transfusion syndrome (unbalanced arteriovenous anastomoses), and the single amniotic sac increases the risk for umbilical cord entanglement and intrauterine fetal demise. Therefore, monozygotic twinning can typically be traced to a brief period of time at 20

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T sign for twins

Monochorionic diamniotic



Single placenta

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