

Aberrant Liquor

Topic- based Uworld Questions

Block 1, 2, 7, 8



A 39-year-old woman, gravida 2 para 1, at 38 weeks gestation, comes to the office for a routine prenatal visit. The patient feels well and reports normal fetal activity. Last week, she had nausea, vomiting, and diarrhea for 24 hours, but she has been able to eat and drink normally for the past several days. For the past 2 days, the patient has had increased clear vaginal discharge with irregular, painful contractions but no vaginal bleeding. She has no chronic medical conditions, and her only medication is a prenatal vitamin. Temperature is 99.6 F (37.6 C), blood pressure is 132/86 mm Hg, and pulse is 96/min. The uterus is nontender and the fundal height is 34 cm. Fetal heart tones are 135/min. Fetal ultrasound shows a cephalic fetus, measuring at the 50th percentile for gestational age, and an amniotic fluid index of 2 cm (normal: >5 cm). Which of the following is the most likely cause of this patient's amniotic fluid level?

- A. Fetal congenital infection
- B. Maternal dehydration
- C. Normal gestational age variant
- D. Rupture of membranes
- E. Uteroplacental insufficiency

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- A. Fetal congenital infection (2%)
- B. Maternal dehydration (9%)
- C. Normal gestational age variant (1%)
- D. Rupture of membranes (77%)
- E. Uteroplacental insufficiency (8%)

Omitted

Correct answer

D

77%
Answered correctly02 secs
Time Spent04/23/2020
Last Updated

Explanation

This patient has **oligohydramnios**, an amniotic fluid index of ≤ 5 cm. The etiology of oligohydramnios can vary with gestational age:

- Early-gestation oligohydramnios is concerning for fetal etiologies (eg, aneuploidy, renal agenesis, posterior urethral valves) because

This patient has **oligohydramnios**, an amniotic fluid index of ≤ 5 cm. The etiology of oligohydramnios can vary with gestational age:

- Early-gestation oligohydramnios is concerning for fetal etiologies (eg, aneuploidy, renal agenesis, posterior urethral valves) because amniotic fluid volume is dependent on normal fetal urine production.
- **Second- and third-trimester** causes of oligohydramnios are typically due to uteroplacental insufficiency (with concomitant fetal growth restriction) or maternal causes, such as dehydration or rupture of membranes (with **normal fetal growth**).

At term gestation, the most likely cause of new-onset oligohydramnios is **spontaneous rupture of membranes**. Although membrane rupture typically presents as a sudden gush of fluid, patients can have a subclinical presentation with slow leakage occurring over days, as in this patient with **increased clear vaginal discharge**. Because rupture of membranes is a common cause of oligohydramnios, even asymptomatic patients with oligohydramnios require speculum examination to evaluate for membrane rupture.

(Choice A) Although fetal congenital infections (eg, cytomegalovirus) can cause oligohydramnios, they typically also cause fetal growth restriction and other abnormal ultrasound findings, which are not seen in this patient.

(Choice B) Severe maternal dehydration may temporarily decrease maternal intravascular volume, uteroplacental perfusion, and fetal amniotic fluid production. However, this patient's self-limited, acute gastroenteritis resolved several days ago, and her vital signs are normal, making this diagnosis less likely.

(Choice C) The amniotic fluid index (AFI) varies with gestational age and peaks at 30-32 weeks gestation before gradually declining; however, a third-trimester AFI of ≤ 5 cm is always abnormal.

(Choice E) Maternal vascular disease (eg, chronic hypertension, systemic lupus erythematosus) increases the risk for uteroplacental insufficiency, which causes oligohydramnios due to decreased perfusion of the fetal kidneys. However, these patients typically have concomitant fetal growth restriction, which is not seen in this patient.

Educational objective:

The most common cause of oligohydramnios (amniotic fluid index ≤ 5 cm) at term gestation is spontaneous rupture of membranes. Patients typically have normal fetal growth and leakage of clear vaginal fluid.

References



Previous



Next



Full Screen



Tutorial



Lab Values



Notes



Calculator



Reverse Color



Text Zoom

A 24-year-old woman, gravida 1 para 0, at 37 weeks gestation comes to the office for a routine prenatal visit. The patient has no concerns today. Her fetus is active, and she has no contractions, vaginal bleeding, or leakage of fluid. The patient's pregnancy was dated by a first-trimester ultrasound, and her 18-week ultrasound revealed normal fetal anatomy. At 26 weeks gestation, her 1-hour glucose screen was abnormal, but her 3-hour glucose tolerance test was normal. The patient has no medical conditions and has had no surgeries. Blood pressure is 112/68 mm Hg and pulse is 90/min. Fundal height is 42 cm and fetal heart rate is 138/min. Because of the uterine size-dates discrepancy, an ultrasound is performed, which reveals an intrauterine fetus in the cephalic position with an amniotic fluid index of 30 cm (normal: 8-24 cm). Which of the following is the best next step in management of this patient?

- A. Amnioreduction
- B. Betamethasone
- C. Cesarean delivery
- D. Expectant management
- E. Indomethacin
- F. Induction of labor

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Fundal height (ie, uterine size) is measured during second- and third-trimester prenatal visits as an indirect assessment of fetal growth and amniotic fluid volume. This patient's **uterine size-larger-than-dates discrepancy** (42 cm at 37 weeks gestation) prompted an ultrasound evaluation that reveals **polyhydramnios**, defined as an amniotic fluid index ≥ 24 cm or a deepest vertical pocket of ≥ 8 cm. Polyhydramnios occurs due to an imbalance of fluid production (ie, fetal urination) and removal (ie, fetal swallowing). Although some patients have an identifiable cause (eg, diabetes mellitus, fetal tracheoesophageal fistula), most cases are **idiopathic**, as in this patient.

Patients with polyhydramnios may have abdominal discomfort (from increased uterine size), dyspnea (due to maternal lung compression), and preterm contractions (from increased intrauterine pressure); however, most patients are asymptomatic. Management is based on severity, maternal symptoms, and gestational age:

- Patients with severe or symptomatic polyhydramnios at preterm gestation are at increased risk for obstetric complications, including preterm labor and preterm prelabor rupture of membranes. Therefore, these patients may benefit from amnioreduction (ie, amniotic fluid removal by [amniocentesis](#)) (**Choice A**).
- In contrast, patients with **mild, asymptomatic** polyhydramnios at **term gestation**, such as this patient, can undergo **expectant management** because obstetric outcomes are unchanged by increased antenatal fetal surveillance or intervention.

(**Choice B**) Betamethasone is administered to patients at risk for preterm delivery (ie, < 37 weeks gestation) to reduce the risk of neonatal respiratory distress syndrome.

(**Choices C and F**) In patients with mild, asymptomatic polyhydramnios, delivery planning (eg, cesarean delivery, induction of labor) is based on routine obstetric indications only (eg, nonreassuring fetal heart rate, postterm gestation).

(**Choice E**) Indomethacin is a cyclooxygenase inhibitor that reduces amniotic fluid volume by decreasing prostaglandin synthesis, fetal renal blood flow, and fetal urine output. It is contraindicated in patients at ≥ 32 weeks gestation due to the risk of premature fetal ductus arteriosus closure.

Educational objective:

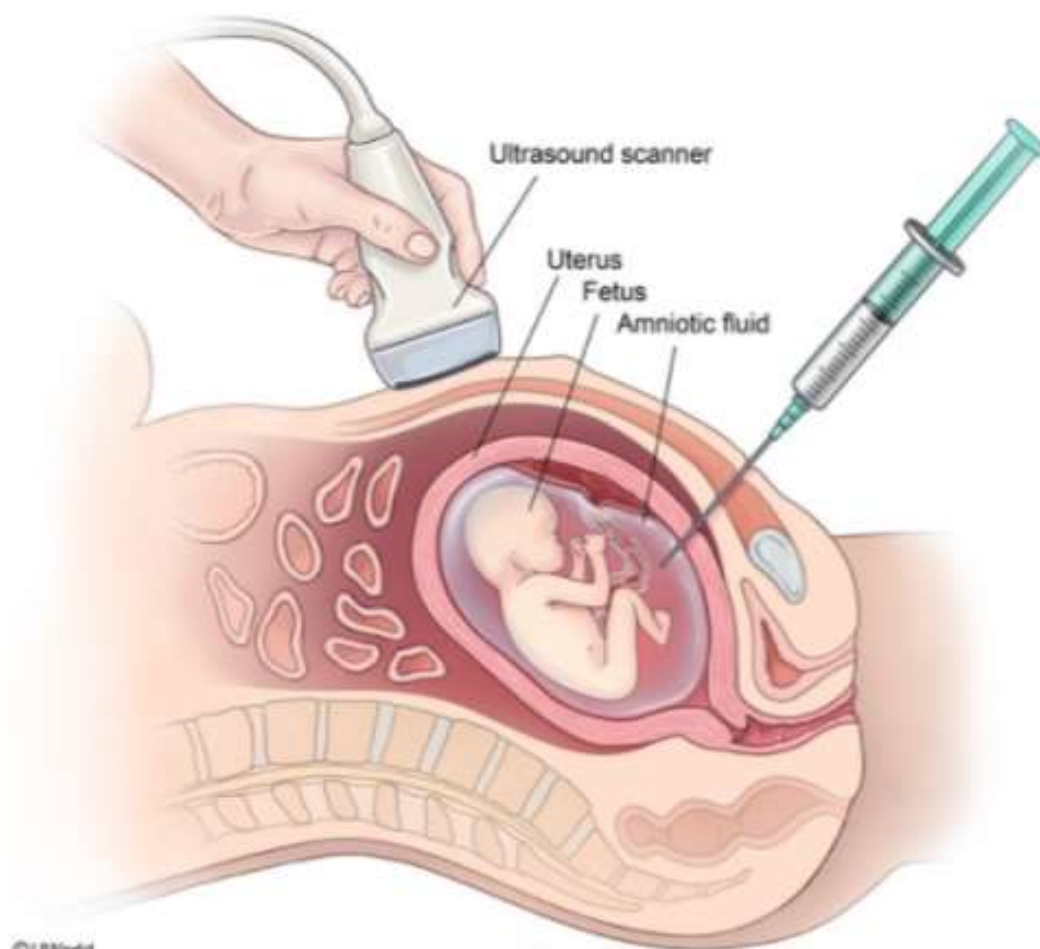
Most cases of polyhydramnios (ie, amniotic fluid index ≥ 24 cm) are idiopathic and asymptomatic. Patients at term gestation with mild, asymptomatic polyhydramnios are expectantly managed.

References

Fundal height (ie, uterine size) is measured during second- and third-trimester prenatal visits as an indirect assessment of fetal growth and

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Amniocentesis



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