12. placenta accreta
13. partial hydatidiform mole
14a. hyperplasia
14b. placentomegaly
15a. artery
15b. growth
16. supernumerary
17a. cocaine
17b. body stalk anomaly
18. multiple
19a. fetal hypoxia
19b. circulatory
20. disappearance of Wharton’s jelly

SHORT ANSWER

1. Sonographic signs suspicious for placenta accreta include a concomitant placenta previa, large numerous placent al vascular lacunae (tornado-shaped vessels), absent lower uterine segment myometrium at the placenta/bladder interface, and a turbulent flow at the junction between the myometrium and placenta using color flow Doppler. The most common location for placenta accreta is anteriorly at the lower uterine segment. Placental lacunae and abnormal color Doppler imaging patterns are the two most helpful ultrasound markers for this condition.

3. Intense pain at the site of the placenta is suspect for abruption and may display as vaginal bleeding without significant intrauterine hematoma, as the development of a retroplacental or marginal hematoma with or without vaginal bleeding, or as formation of a submembranous clot at a distance from the placenta, with or without vaginal bleeding. It is possible to have concealed hemorrhage and the absence of vaginal bleeding. The patient may present clinically with acute abdominal and pelvic pain, vaginal bleeding, uterine tenderness, and fetal distress. The sensitivity of ultrasound to detect a placental abruption is approximately 50% due to the variable sonographic appearance depending on the size and location of the separation and the timing of the evaluation. Over time a hemorrhage will demonstrate as more echogenic.
4. A nuchal cord is present in about 24% of all deliveries and is usually loosely looped and considered clinically insignificant. Given the common occurrence of nuchal cords and its association with a favorable outcome, scanning for and reporting this condition remains controversial.

5. Amnion rupture sequence or amniotic band syndrome is a condition that is thought to occur as a result of rupture of the amnion. Amniotic bands may tear or disrupt previously normally developed structures leading to congenital amputations, constriction rings, and nonanatomic facial clefts.

**IMAGE EVALUATION/PATHOLOGY**

1. Both images A and B demonstrate normal central umbilical cord insertion into the placenta. Image B, a power Doppler image, shows a helical (spiral) cord arrangement, which is normal.

2. Image A is suspect for umbilical vein varix in the transverse section of the fetal abdomen. Image B displays a measurement of 11 mm between the calipers, confirming umbilical vein varix. Diagnostic criteria include an abdominal vein diameter of greater than 9 mm or an enlargement of the varix of at least 50% larger than the diameter of the intrahepatic umbilical vein.

3. Both images show a transverse view of the umbilical cord. Image A is the more desirable three-vessel umbilical cord showing the “Mickey Mouse” sign. Image B demonstrates a two-vessel umbilical cord with a single umbilical artery.

4. Placentomegaly is evident with multiple small cystic areas within the placental tissue. The condition, placenta mesenchymal dysplasia (PMD), may be mistaken for molar pregnancy both clinically and macroscopically due to the presence of “grape-like” vesicles. A fetal pole is noted inferior to the large placenta.

5. Images A and B display a chorioangioma. The mass protrudes from the fetal surface of the placenta. Internal calcifications are seen, along with vascularity.

**CASE STUDY**

1. These pregnancies both have placenta traversing the internal os, which is a cause of bleeding. It occurs in 1 in 200 to 250 pregnancies.

2. The transverse fetal abdomen reveals gastroschisis. Note umbilical hernia and omphalocele display contained anterior abdominal wall defects.