Neither hydroallantois nor hydroamnios are common conditions in the pregnant mare, but if not detected early can lead to the demise of both mare and foal. Hydroallantois, a sudden increase in the volume of allantoic fluid during a period of 10 to 14 days, is more common than hydroamnios, an excessive accumulation of amniotic fluid in the amniotic cavity. Hydroamnios, unlike hydroallantois, develops gradually over several weeks to months during the second half of gestation. It is often associated with a deformed fetus with a facial, genetic, or congenital abnormality. Although swallowing in the fetus plays a role in the maintenance of fetal fluid balance, other mechanisms may be important. The normal volume of amniotic fluid in mares near term is 3 to 7 L and is composed of secretions of the amnion and the nasopharynx of the fetus, fetal saliva, transudation from maternal serum, and fetal urine. Whether the problem arises because of an increase in secretion or decrease in resorption or both is not clear. It has been suggested that the fetus might actively regulate the volume and composition of the amniotic fluid by deglutition, and the prevention or impairment of swallowing may lead to hydramnios. The normal volumes of allantoic fluid in the near-term mare have been reported to be 8 to 15 liters. The pathophysiology of hydroallantois in the mare remains unknown. Some authors have suggested that the increase in fluid is a placental problem caused either by increased production of fluid or decreased transplacental absorption. Others have proposed that the etiology is related to placentitis and heritability.

In both hydroallantois and hydroamnios, mares present with abnormally increased abdominal distension for the duration of gestation. Mares may be anorexic, have high heart rates, be depressed and may have severe ventral edema/plaques, abdominal discomfort, and labored breathing caused by hydraulic pressure on the diaphragm. Mares may have great difficulty walking, and many mares prefer to remain recumbent, especially with hydroallantois. Sensitivity may be evident during palpation of the caudal aspect of the abdominal wall. Mares in advanced stages of hydropsic conditions may have evidence of ventral abdominal wall herniation or prepubic tendon rupture. Early management is aimed at preventing these body wall tears, which improves the mare’s prognosis, since obtaining a live foal has not been reported with hydroallantois and has been reported only once with hydroamnios.

Rectal palpation is diagnostic and reveals a huge, taut, fluid-filled uterus. The fetus cannot be felt, and the uterus is usually tightly distended. Transrectal ultrasound reveals an excessive volume of hyperechogenic(speckled) fluid. Differentiation between an increase in allantoic verses amniotic fluid can sometimes be difficult. If the fetus is visible, the amnion will be nearby, compared with the allantois, which lies close to the body wall. Transabdominal ultrasound will confirm the presence of excessive volumes of fluid and help differentiate between the two cavities as well as permit evaluation of fetal viability. In one recent report, clinicians obtained samples of the fetal fluid via ultrasound-guided amniocentesis and allantocentesis. This provided definitive differentiation between the two cavities by enabling comparison of established biochemical reference ranges. Ultrasonography of the abdominal walls for evidence of edema or separation of musculature is necessary to monitor impending body wall tears, especially prepubic tendon rupture, which is a common sequela with hydroallantois and
can dramatically change the prognosis for the livelihood and reproductive value of the mare.

Once diagnosis of hydroallantois is confirmed, fetal viability and udder development is determined and milk electrolytes are assessed to estimate the level of fetal maturity. Gestational age and fetal viability determine the treatment method of choice. Mares evaluated earlier (5-7 months) in gestation may undergo elective termination of pregnancy. Later in gestation or in mares with profound abdominal enlargement and large volumes of fluid in the uterus require controlled drainage of the fluid before delivery of the fetus. Controlled drainage is essential because of the alteration of total body fluid balance. Sudden loss of this large volume of fluid may result in shock. Supportive care includes abdominal support (via placement of an abdominal wrap), IV fluids, broad-spectrum antimicrobials, and anti-inflammatories, with or without agents to relax the uterus and altrenogest (Regumate), depending on the desired results. Slow siphoning of the allantoic fluid can be accomplished by using a chest drain tube, inserting the protected sharp end of the tube through the cervix and through the placenta with sterile extension tubing attached to control the flow rate. Concurrent large-volumes of intravenous fluids should be administered to prevent hypovolemic shock. Some pericervical placental separation is common. This procedure involves use of aseptic technique to minimize contamination of the fetal membranes. Attempts have been made to preserve pregnancy in mares in the last 2 to 4 weeks of gestation by draining enough fluid to prevent abdominal wall ruptures yet still support the pregnancy, but 4 days is the longest interval that has been reported between fluid draining and spontaneous abortion. Fetal death may occur as a result of fetal asphyxia or fetal infection secondary to contamination of the placental fluids or membranes during drainage. Depending on the clinician, management of mares in which fetal viability is not realistic includes inducing parturition or allowing natural expulsion. Close monitoring for impending parturition is necessary, for these mares may have poor cervical dilation and uterine contractility (inertia) as a result of the chronic uterine stretching and may require assistance with delivery. Malpositioning and malpresentations are common. In most situations, the fetus can usually not be saved, but prompt intervention yields the best prognosis for physical recovery as well as for future fertility of the mare.

Conservative supportive management of mares with hydroamnios can result in the birth of a live foal. In that report, the mare was monitored for signs of weakness in the prepubic tendon and abdominal wall, while the fetus and placenta were monitored for signs of stress and pending abortion. Anti-inflammatories and altrenogest were administered for pregnancy maintenance. Like with hydroallantois, hydroamnios has the potential complications of hypovolemic shock and cardiac arrhythmias that can be addressed by supportive care (large-volume crystalloid infusion). When the abdominal wall weakens or there is no viable foal, induction of parturition, drainage of fluid or Cesarean section surgery (with fetal malformations) may be necessary.