



Learn simply

Chorioamnionitis (Intraamniotic Infection)

Passion profession same

Symptoms/signs suggestive of chorioamnionitis^{1,2}

Initial management

- Admit to Labor & Delivery
- Check CBC, blood cultures, urinalysis
- Confirm the diagnosis²
- Exclude other diagnoses³
- Document fetal wellbeing
- Exclude maternal/fetal complications⁴

Unable to confirm diagnosis

- Continue inpatient management
- Withhold antibiotic therapy
- Serial clinical examinations
- Serial assessment of fetal wellbeing
- Consider amniocentesis to confirm diagnosis, particularly at <37 weeks⁵

Clinically stable

Continued suspicion for chorioamnionitis

- Discharge home
- Withhold antibiotic therapy
- Patient to follow symptoms (fever, contractions)
- Fetal kickcharts

- Consider continued inpatient management
- Amniocentesis⁵

Follow-up outpatient visit in ½–1 week

Diagnosis confirmed

- Continued management on Labor & Delivery
- Consider anesthesia, MFM consultation
- Antipyretic therapy and analgesia, as needed
- Continuous fetal heart rate monitoring
- Start intravenous broad-spectrum antibiotic treatment (no need for additional GBS chemoprophylaxis)⁶

Proceed with immediate delivery⁷

- Continue intravenous antibiotics
- Neonatology consult, if indicated
- Consider antenatal corticosteroid therapy, if indicated.
- Cesarean should be reserved for usual obstetric indications⁸

Postpartum management

- Continue intravenous antibiotics for 24–48 hours
- Patients may breastfeed

1. Chorioamnionitis or intraamniotic infection (IAI) is usually an ascending infection by organisms of the lower genital tract. As such, most intraamniotic infections are polymicrobial, including such organisms as *E. coli*, *Klebsiella*, *Bacteroides*, GBS, *Fusobacterium*, *Clostridium*, and *Peptostreptococcus*. Mild subclinical infections may be associated with *Mycoplasma*, *Ureaplasma*, and *Fusobacterium*.
2. Risk factors for chorioamnionitis at term include prolonged rupture of the fetal membranes (>24 hours), multiple digital vaginal examinations, and active vaginal infection (such as bacterial vaginosis). Over 50% of pPROM are associated with occult IAI and 20-30% of preterm labor has been attributed to IAI, often in the absence of symptoms other than preterm labor. In rare instances (such as listeriosis), maternal bacteremia can seed the amniotic space.
3. Chorioamnionitis complicates 14% of all pregnancies.
4. Chorioamnionitis is a clinical diagnosis characterized by maternal fever $\geq 38^{\circ}\text{C}$ ($>100.4^{\circ}\text{F}$ orally) and one or more of the following features: fetal tachycardia (>160 bpm), maternal tachycardia (>100 bpm), uterine tenderness (typically fundal tenderness between contractions), or foul odor of the amniotic fluid.
5. Constitutional symptoms (chills, malaise), uterine contractions, and an elevated white cell count are common findings, but are not required for the diagnosis.
6. There is no place for radiologic imaging studies to confirm the diagnosis. Intraamniotic infection with *Listeria monocytogenes* is unusual in that the mother is often asymptomatic.
7. Amniocentesis remains the gold standard for diagnosing IAI when the clinical findings suggest significant



1. The differential diagnosis of chorioamnionitis includes labor and other infectious/inflammatory conditions such as appendicitis, urinary tract infection (cystitis, pyelonephritis), and inflammatory bowel disease.
2. Maternal complications include preterm labor and delivery, increased cesarean delivery rate, postpartum endometritis, pulmonary edema, sepsis, acute respiratory distress syndrome (ARDS), and death. Fetal complications include prematurity, fetal/neonatal sepsis, and increased risk of cerebral palsy.
3. Definitive diagnosis requires a positive amniotic fluid culture obtained by transabdominal amniocentesis. Other features of the amniotic fluid that may suggest infection include glucose ≤ 20 -mg/dL, leukocytes, and bacteria on Gram stain. Gram stain alone has a sensitivity of only 30-50%. In the setting of equivocal symptoms, a definitive diagnosis by amniocentesis can be valuable in guiding the plan of care.



1. Although chorioamnionitis cannot be managed expectantly with antibiotics, prompt administration of antibiotics will reduce neonatal sepsis, maternal febrile morbidity, and duration of hospitalization. Intravenous ampicillin 2 g q4-6 h plus gentamycin 1.5 mg/kg q8h (after confirmation of normal renal function) are the antibiotics of choice prior to delivery.
2. In penicillin-allergic patients, vancomycin 1 g intravenously q12h should be used instead of ampicillin.
3. Clindamycin or metronidazole should be added immediately after clamping of the cord to further cover anaerobic organisms.
4. Although antibiotics have traditionally been continued until the patient was afebrile and asymptomatic for 24-48 h postpartum, newer evidence suggests that a single dose of antibiotics beyond delivery may be sufficient, particularly for vaginal deliveries.
5. Longer antibiotic therapy may be required if blood cultures are positive.



1. Once the diagnosis of chorioamnionitis has been established, delivery should be affected regardless of gestational age.
2. Ideally, delivery should be achieved within 12-18 hours, but labor can be continued beyond that time so long as the fetal status is reassuring.
3. Maternal prognosis is good with prompt diagnosis and treatment. Neonatal mortality and morbidity are related primarily to gestational age.
4. Chorioamnionitis is an indication for delivery, but is not in of itself an indication for cesarean delivery. However, pregnancies complicated by chorioamnionitis are more likely to be delivered abdominally, usually due to non-reassuring fetal testing.

