

PRETERM PREMATURE RUPTURE OF MEMBRANES

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Definition

-rupture of membranes prior to onset of true labour at gestational age <37 weeks.

Epidemiology

-3% of all births

Pathophysiology

Activation of hypothalamus-pituitary-adrenal axis

- maternal anxiety: increased cortisol production
- fetal uteroplacental vasculopathy stress \Rightarrow increased CRH production
- CRH, cortisol: increased prostaglandin secretion \Rightarrow contractions

Inflammation

- systemic, amniochorionic inflammation \Rightarrow TNF, IL-1, IL-6, IL-8 increase \Rightarrow endothelin, proteases increase \Rightarrow contractions

Pathophysiology

Decidual hemorrhage

-clotting factors VIIa, Xa increased \Rightarrow thrombin increased \Rightarrow contractions

Pathological uterine distention

-oxytocin receptors, PG increased \Rightarrow contractions

Pathological cervical changes

-cervical conization \Rightarrow mucus reduction

Clinical signs and symptoms

- sudden gush of clear fluid out of vagina
- wetness sensation

Complications

- preterm labour
- chorioamnionitis:
 - maternal fever, tachycardia, uterine tenderness, foul smelling discharge, leukocytosis
 - fetal tachycardia
- sepsis (maternal, fetal, neonatal)
- death (maternal, fetal, neonatal)

Diagnosis

Speculum examination

-pool of clear fluid in vagina, cervix-gold standard in diagnosis

Vaginal culture

-posterior vaginal fornix: culture swab

Vaginal pH

-nitrazine paper: alkaline-change of colour

-indicative

-false positive: sperm, blood, infection

Diagnosis

Nitrazine test



Diagnosis

Fern test

-vaginal secretions on glass slide: amniotic fluid: fern pattern

Fetal fibronectin test

-fetal fibronectin: presence-increased likelihood of preterm labour, PPRM

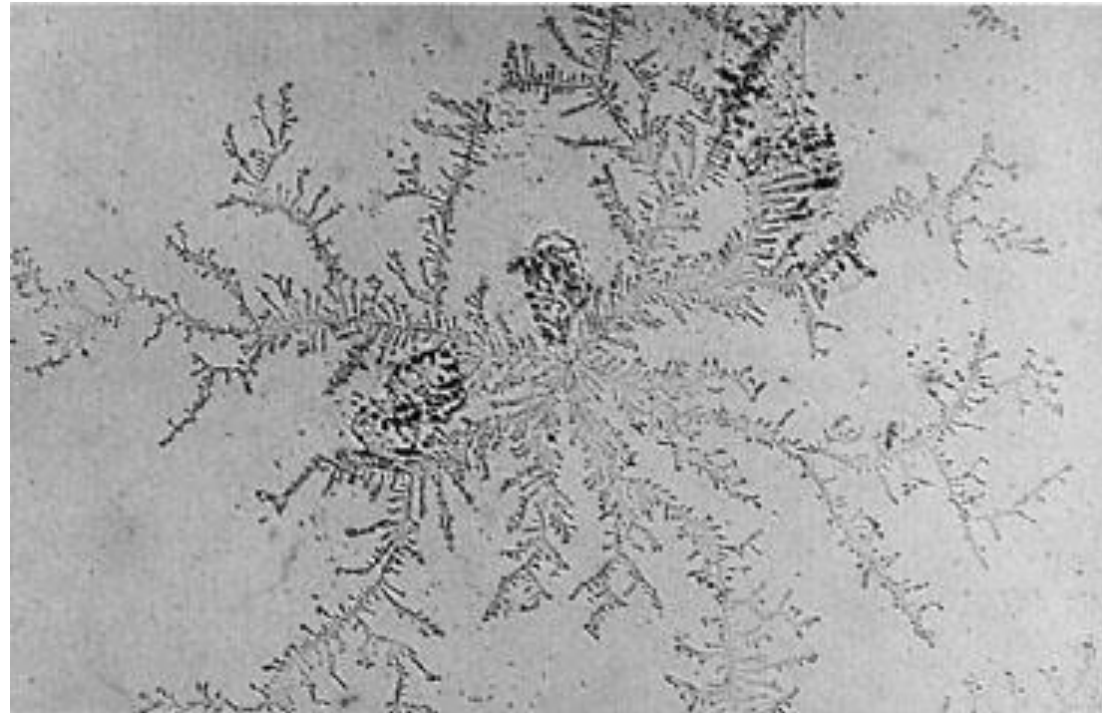
Amniotic fluid protein detection

-proteins: presence-PPROM

-placental alpha-microprotein 1, IGFBP01, AFP

Diagnosis

Fern test



Diagnosis

Amnisure, ROM Plus



Management

Antibiotics

Doses

-cephalosporin, 48h, i.v + metronidazole, 48h, i.v

Corticosteroids

-if no signs of infection

Tocolytics

-only for corticosteroid administration

Management

Delivery

- if signs of chorioamnionitis

- at 34 weeks (the risks of prolonging pregnancy above this age do not outweigh benefits)



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