



Benign and self-limited neonatal respiratory condition characterized by rapid breathing and pulmonary edema due to delayed clearance of fetal lung fluid (FLF).

RISK FACTORS

- **Maternal:** Caesarean delivery, short/no labor, diabetes, asthma
- **Fetal:** male sex, macrosomia, SGA, prematurity

NORMAL PHYSIOLOGY

- **Secretion of FLF into alveoli:** supports lung growth & function in utero
- **Reabsorption of FLF via:**
 - Thoracic squeeze through birth canal
 - Breathing/crying
 - Activation of sodium channels

TTN PATHOPHYSIOLOGY

Delayed reabsorption of FLF
 ↓
 Pooling in lung interstitium & interlobar fissures
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 Decreased lung compliance
 ↓
 Impaired lung inflation

SIGNS & SYMPTOMS

- **Timing:** immediately after birth (within first 2h)
- **Tachypnea:** RR > 60
- **Other:** cyanosis, tachycardia (HR > 160), oxygen desaturations



- **Inspection:** signs of increased WOB such as grunting, nasal flaring, inter/subcostal retractions
- **Auscultation:** typically, clear breath sounds, air entry may be decreased



DIAGNOSIS

- Helpful to confirm diagnosis with chest x-ray and blood gas if severe
- Symptoms should resolve within 12-72h

INVESTIGATIONS

- **Chest XR:** perihilar streaking, hyperinflation, fluid in interlobar fissures
- **Blood Gas:** assess for respiratory acidosis
- Extended workup for differential diagnoses if clinically indicated



DIFFERENTIAL DIAGNOSES

Respiratory distress syndrome, meconium aspiration syndrome, pneumothorax, pneumonia, persistent pulmonary hypertension, sepsis, congenital heart disease, CNS disease, inborn errors of metabolism



MANAGEMENT

Supportive Care:

- Keep warm
- NPO
- IV fluids if RR > 80 and increased WOB
- Enteral tube feeds if stable and RR < 80



Respiratory Support (if indicated):

- Nasal CPAP to relieve severe WOB
- Supplemental oxygen if hypoxemic, target SpO2 of 92-96%, FiO2 usually <40%

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