



# The Corner

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## 14. Bronchiolitis in the Emergency Department (ED)

**Father:** Good afternoon Doctor, I bring my daughter Sophie because she can't breathe well and she's eating less.

**Doctor:** Good afternoon, I am Doctor Chase. How old is she? When did this start? Has she had fever or any other symptoms like vomiting or diarrhea?

**Father:** She is 4 months old. It started two days ago with coughing and a runny nose. Her temperature has risen up to 37.5°C. She hasn't had any other symptoms. At first it seemed like a normal cold, but since last night she breathes faster and her chest moves strangely.

**Doctor:** Is she eating at least half of the usual amount?

**Father:** I wouldn't say so. She normally breastfeeds and then takes 90 ml of her baby bottle, but now she's only breastfeeding a little and doesn't want her bottle. Her diaper is dry since this morning.

**Doctor:** Was Sophie born full-term or earlier than expected? Are her vaccinations up to date? Does she have any siblings that attend school or day care?

**Father:** She was born at 36 weeks prematurely. All her vaccinations are up to date. She has a 2-year-old brother who attends day care.

**Doctor:** OK, let's take a look at the baby.

### PHYSICAL EXAMINATION:

**Pulse:** 150 bpm. Tachypnea: 60 bpm. SpO<sub>2</sub>: 91%. Axillary temperature: 37°C. Acceptable general condition. Well-nourished and hydrated. Capillary refill time: 2 seconds. Mild to moderate subcostal and intercostal retractions; intermittent nasal flaring. Cardiac auscultation: regular, no heart murmur. Pulmonary auscultation: bilateral hypoventilation, bibasilar crackles. HEENT: head ears nose and throat examination. Hyperemic oropharynx, mucus in cavum and nose. Normal tympanic membranes. No adenopathies. Abdomen: soft, apparently nontender to palpation. No liver edge or spleen felt. No masses. Neurological: awake, alert, normotensive anterior fontanelle.

**Doctor:** Sophie has bronchiolitis. It is defined as the first episode of respiratory distress in children under two years of age. It is a lower respiratory tract infection usually caused by a virus, the most frequent one is called Respiratory Syncytial Virus or RSV. It causes swelling and mucus buildup in the small airways, which can partially or completely block them, producing troublesome breathing and a decrease in the blood level of oxygen. Usually children get worse over the first four days of illness and then start to improve. Sophie has just begun with the symptoms, so she may get worse in the following days.

**Father:** So what do we do now?

**Doctor:** Well, she already has important respiratory distress which you can tell by how she moves her chest and nose when she breathes. This makes it difficult for her to feed appropriately and therefore her oral intake is too low. Also, she isn't capable of maintaining an adequate level of oxygen in her blood. Because of all of this, the best approach is to hospitalise her for monitoring, IV fluids hydration and oxygen support. There is no specific treatment for the virus other than

symptomatic, such as removal of nasal secretions, nebulisation of a hypertonic saline solution and antipyretics if needed.

**Father:** Will she be hospitalised right away?

**Doctor:** Before she is admitted into the hospital we'll have to analyse her nasal secretions for RSV because if it is positive she will need to be isolated from the rest of the patients. For the moment there is no need for any other additional tests.

**Father:** Will she be hospitalised for a long time?

**Doctor:** This depends on each child. For her to be discharged safely she will need to be able to eat at least half of her usual amount and have normal oxygen levels without supplemental oxygen. When her respiratory distress has decreased we can increase her oral intake by breaking up her usual feedings offering her small amounts of milk frequently and see if she tolerates it without fatigue.

**Father:** OK then, I'll call her mother to inform her about the situation. Thank you very much.

### KEY WORDS:

Bronchiolitis: bronquiolitis.

Cold: catarro común.

Chest: pecho/tórax.

To breastfeed: tomar pecho.

Baby bottle/bottle: biberón.

Diaper: pañal.

To be born full-term: nacer a término.

Vaccinations up to date: vacunaciones actualizadas.

Day care: guardería.

To be born prematurely: nacer prematuramente.

Pulse (beats per minute, bpm): Pulso/frecuencia cardiaca (latidos por minuto).

Tachypnea (breaths per minute, bpm): Taquipnea (respiraciones por minuto).

Subcostal and intercostal retractions: tiraje subcostal e intercostal.

Nasal flaring: aleteo nasal.

Bibasilar crackles: crepitantes bibasales.

Normotensive anterior fontanelle: fontanela anterior normotensa.

Mucus buildup: acumulación de moco.

Troublesome breathing/respiratory distress: dificultad/trabajo respiratorio.

Monitoring: monitorización.

Oxygen support/supplemental oxygen: oxígeno suplementario.

Removal of nasal secretions: limpieza de secreciones nasales.

Nebulisation of a hypertonic saline solution: nebulización de suero salino hipertónico.

To be isolated: ser aislada.

Break up feedings: fraccionar las tomas.



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