

Copd 2018- Respiratory management of the newborn with an omphalocele- Joanne Baerg, Loma Linda University Children's Hospital, USA

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An omphalocele is a congenital defect of the umbilical ring with herniation of the viscera. Despite of advances in neonatal care, for live-born infants, the mortality rate remains between five and 25%. Respiratory failure at birth is an independent predictor of mortality for omphalocele infants, but the causes are diverse. In this presentation, giant and non-giant omphalocele are compared, as giant omphalocele have more respiratory difficulties. Prenatal predictors of post-natal respiratory failure and care strategies are discussed. Pulmonary hypoplasia is defined. Historically, fetuses and infants with omphalocele are reported to have markedly reduced chest capacities. Recently, fetal magnetic resonance imaging (MRI) has expanded the understanding of decreased congenital lung volume in infants with omphalocele. Clinical-radiologic correlation studies support the use of prenatal MRI to predict the degree of respiratory insufficiency observed in the postnatal period. The contribution of major anomalies to respiratory difficulties is discussed. Infants with omphalocele may have increased pulmonary vascular reactivity and pulmonary hypertension that increases the postnatal mortality risk. In this presentation, pulmonary hypoplasia and pulmonary hypertension are defined as distinct entities. The two diagnoses must be distinguished from each other in the clinical setting. The implications of congenital heart defects are explained. The role and goals of assisted ventilation for respiratory failure are expanded. Since 2011, infants with omphalocele and respiratory failure have required the extra-corporeal membrane oxygenator. The first review of the Extra-Corporeal Life Support (ELSO, Ann Arbor, MI USA) database for the causes of respiratory failure and outcomes in omphalocele infants place will be presented. The timing of surgical repair, post-operative complications such as compartment syndrome, delayed surgical closure techniques and the implications of a ruptured omphalocele are explained. Pulmonary function abnormalities, chronic lung disease, the role of tracheostomy, the influence of gastroesophageal reflux disease (GERD), prematurity, and improved

outcome strategies are discussed.

In 2019 coronavirus disease, COVID-19 is a single-stranded ribonucleic acid (RNA) encapsulated corona virus and is extremely infectious, resulting in extreme acute respiratory syndrome-Corona virus-2. Droplet distribution (i.e. fairly large particles that settle in the air) is believed to be primarily the transmission and direct interaction with the individual, rather than 'airborne propagation' (in which smaller particles stay longer in the air). No effective antiviral treatment for COVID-19 infection exists, only supporting treatments, especially for more severe cases, including respiratory care, for infected patients. About 15% of COVID-19 individuals experience mild to extreme diseases and need to be accompanied by hospitality and oxygen; 5% may need adhesion and support therapies such as intubation and ventilation to an Intensive Care Unit. The most common complication for serious COVID-19 patients is extreme pneumonia, while others are more prevalent for at-risk groups such as the older generation, septic and septic disease and multi-organ failure, including acute kidney injury and cardiac injury, among other complications. There will be no different airway clearance requirements for many COVID-19 patients. In order to reduce the risk of transmission, it is crucial that employee interaction is reduced by supportive patients and thus meet the normal call policy and criteria. To date the pneumonia features and bilaterally splicing shades or ground-glass distortion in the lungs of COVID 19 patients needing hospitalization. No COVID-19 patients who had high secretion loads had been identified, which required intensive respiratory and airway physiotherapy. This may change as the condition progresses and all presenting patients should also be examined before using mechanical devices and following guidance from a particular physiotherapist service provider, in consultation with consultants Respiratory Clinicians / Critical Care Consultants. It is important to remember that therapeutic procedures for COVID-19 patients are contraindicated. Many patients may need customized physiotherapy procedures, including airway clearance

or oscillating machines, with established respiratory conditions. In this situation, it is important to discuss with consultants the risks and advantages of continuing with the regime.

The patients are uncomplicated and may have unspecific symptoms, such as fever and weakness, cough, anorexia, malaise, muscle pain, sore throat, dyspnea, inflammation of nose or headache. Patient illnesses are not known for their diseases. Seldom. Diarrhoea, nausea and vomiting can also occur in patients.

Elderly and immunocompromised individuals can experience atypical symptoms. Capturing COVID-19 Symptoms can be signs of physiological adaptation to pregnancy or of adverse pregnancy events such as dyspnea, nausea, GI or fatigue.

- Adult: pneumonia without symptoms and no need for extra oxygen. Adult: with pneumonia.
- Child: Non-severe cough pneumonia + fast respiration: fast breathes < 2 months of age < 60; two to 11 months of age < 50; and one to five years of age = 40 and no proof of a serious pneumonia. Are there no signs? Child: Non-severe pneumonia?

Patients with an elevated sputum burden may be successful, but this is a less common occurrence in viral pneumonia.

Oxygenation assistance is also required in patients with serious disease. The protection of these steps is uncertain however, and aerosol generation procedures that require clear isolation precaution and EPP consideration should be taken into account. In certain cases, acute respiratory stress syndrome can occur and artificial ventilation can require intubation; in patients with refractory hypoxia, the oxygenation of a body membrane can be indicated. Though effective toxicity is a less common symptom, physiotherapy can be helpful in respiratory therapy and physical rehabilitation for those with COVID-19 who experience airway secretions that can not be independently explained. They may also be used in high-risk people, e.g. patients with known comorbidities, that may be diagnosed with hypersecretion or cough ineffectual (e.g. neuromuscular illness, body respiratory disorders, cystic fibrosis etc.). It may be determined case-by-case. Several contradictory opinions on the use of HFNO have been established as an aerosol generator procedure; however, based on experience from Italy,

HFNO was found to be effective at the early stage with a small cohort of patients who do not have evidence of hypercapnia with a hypoxemic respiratory failure and who can prevent intubation in some cases. [1] Since HFNO is an aerosol producing technique, negative pressure rooms are preferred for patients who are treated with HFNO therapy. Equipment including a lightweight, flow repellent surgery robe and an FFP3 respiratory mask should be worn by all personnel entering the room to ensure low airborne risk of transmission. [1] HFNO is preferred.