Nonimmune Hydrops Fetalis

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**Introduction**

Hydrops fetalis is an excessive accumulation of fluid within the fetal extracellular compartments and body cavities generally characterized by: 
- placent al enlargement
- ascites
- pericardial effusions
- pleural effusions

(Randenberg, 2016, p. 282).

**Pathophysiology**

The main pathophysiologic factor implicated in the development of NIHF is abnormal fluid movement between the plasma and tissues (Randenberg, 2010). Any disruption in the body’s balance of fluid can result in excess fluid in both the body tissues and cavity, leading to edema, ascites, pleural and pericardial effusions. Perinatal mortality with this severe diagnosis is high, between 80-90% (Kayiran, 2010, p. 356). Many theories have been suggested to explain the distribution of fluids that occur with hydrops fetalis:

1. an increase in hydrostatic capillary pressure (resulting in heart failure or from obstruction of outflow return)
2. a reduction in plasma oncotic pressure (from decreased albumin production or increased albumin loss)
3. obstruction of lymphatic flow
4. damage to perihilar capillary injury


**Clinical Management**

Clinical management is indicative for the fetus and the infant in the setting of NIHF. Once a prenatal diagnosis has been made, focus is aimed at the coordination and collaboration with obstetrics/gynecology, social work, cardiology, genetics, and neonatology specialists. The information gathered is used to help with education and potential causes on the family can make an informed choice regarding treatment options. Supportive care measures and education are vital goals in the prenatal period. The parents must be kept informed of what to expect during labor and delivery and especially in the neonatal management in the delivery room; particularly subsequent tests and procedures.

Nursing Implications

Nursing implications are directed at monitoring neonatal resuscitative measures. Preventing cold stress with the use of radiant warmers and a warmed room will help in decreasing added stress to an already compromised infant. Respiratory support with the help of endotracheal intubation, high peak inspiratory pressures and 100% FiO2, umbilical arterial and venous catheter placement for management of hemodynamics and blood gas interpretation, helping in the procedure of bilateral thoracentesis for fluid removal in the pleural space, initiation of volume resuscitation with albumin or other colloids, and cardiovascular support with inotropes to increase cardiac output are all vital by nursing and medical staff to aid in the support and survival of NIHF. Neonatal management requires a skilled and coordinated resuscitative team with a well-equipped birthing hospital and neonatal intensive care unit.

**Conclusion**

In conclusion, despite many advances made in the treatment, management and diagnosis, NIHF still carries a high mortality rate. Further research is still needed to help with the management and treatment of NIHF to decrease intrarural and perinatal mortality.

**Hydrops fetalis**


Infant (a) and (b) with hydrops fetalis (Online Image). Retrieved July 29, 2015 from http://www.motherstobabyuniversity.com/outreach/outreach/paspos/lymphedema/lymphedema/fetalfetalhydrops.html

**Nursing Implications**

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**References**


