SUMMARY

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Pallor is a common and warrying symptom to most parents. Pallor should be looked for in the mucous membranes, creases of the hyperextended palm of the hand and nail beds as well as the skin.

Intra-uterine growth retarded infants due to maternal, infantile or placental factors, resulting in pale and wasted infant due to diminshed subcutaneous fat, loose and dry skin. Post-term infants have, white parchment like or desquamating skin.

Pallor and anemia are usually accompanied, however pallor is not always synonymous with anemia.

Pallor in the newborn is an alarming sign particularly at birth where, rapid diagnosis and immediate resuscitation is required and may be life saving.

When an infant is seen abnormally pale at delivery, three life threatening conditions should be considered and adequately managed. These are, acute blood loss with shock, chronic anemia and severe hypoxia (asphyxia neonatorum

An infant with capillary blood hemoglobin below 14 gm/dl. during the first week of life is anemic. The diagnosis of anemia in the newborn must be made in terms of normal values appropriate for the infant's gestational and postgestational age. Anemia in the newborn is due to either blood loss, hemolysis or impaired production of the red blood cells.

Blood loss accounts for approximately 10 percent of severe cases of anemia in the newborn. It may be because of, occult hemorrhage or iatrogenic blood loss particularly in the preterm infants. Acute blood loss of 20 percent or more of the total circulating blood will cause striking clinical festures of shock.

In cases of chronic anemia, there is marked pallor and in severe cases as in severe hemolysis (erythroblastosis fetalis), the newborn may be presented with hydrops fetalis.

Pallor in the newborn in cases of asphyxia pallida (pale asphyxia) is not the main problem, it improves once the asphyxia is corrected. However, it may be a sign of

the underlying cause for asphyxia, as in cases of hemorrhage or hemolysis. Pallor is also used to assess the degree of asphyxia in the Apgar scoring system. Asphyxia neonatorum is either due to fetal anoxia or after birth anoxia.

Pallor is also one of the nonspecific signs and symptoms of neonatal infection and septicemia, where the clinical manifestations are not only overlap, but also may mimic other disease states.

In addition to the previous cases, pallor may share in the clinical manifestations of other miscellaneous and serious conditions in the newborn period such as:

-Hypoglycemia, where symptoms and signs are rare with blood glucose more than 20 mg/dl. In symptomatic hypoglycemia, pallor is of sudden onset together with a wide range of symptoms and signs. Asymptomatic hypoglycemic newborns, should be early detected by blood sugar determination for all newborns at risk of hypoglycemia.

-Neonatal hypothermia, where pallor is found in one third of cases of hypothermia in the newborn . However, coldness to touch is the major feature suggesting hypothermia in the newborn. It is usually secondary to inadequate enviromental temperature or septicemia.

-Newborn infants suffering from congenital hypothyroidism are very good babies, who do not cry and demand to be fed with circumoral pallor and horse cry, etc. However, in its complete picture it is unmistakable with remarkable skin pallor, thickened protruding tongue, slow pulse rate, sluggish, grotesque facies and retarded bone maturation in X-ray study.

To avoid delayed diagnosis, screening programs are done routinely by T_4 and TSH estimation.

-Infants born to addict mothers, suffer from withdrawal symptoms of which,flushing alternating rapidly with pallor.

-In case of edema in the newborn, interposition of fluid between the patient's blood vessels and the skin surface may result in pallor of the skin.

Management of a newborn presenting with pallor requires prompt examination, investigations and diagnosis of the underlying cause and then adequate treatment is administered. It should always be considered as a serious problem.

History, time of onset of pallor, laboratory findings and peripheral blood examination are helpful in diagnosing the underlying cause, as the treatment depends on the aetiological factor involved.

The treatment of a pale and anemic newborn, depends on the cause of anemia and the severity of the condition. Initial urgent administration of a plasma expander followed by whole blood for the resuscitation of acute blood loss with shock and severe anemia with distress, while mild cases of anemia are treated with ferrous sulphate. Hemolytic anemia in the newborn is treated by exchange transfusion and phototherapy depending on the severity of the hemolytic process in order to maintain adequate hemoglobin and prevention of kernicterus, together with the removal of the causative hemolytic factor.

- In case of asphyxia neonatorum, resuscitation measures for the maintenance of adequate peripheral circulation and establishment of adequate ventilation and oxygenation, depending on the degree of asphyxia evaluated by the Apgar score.

- Infants with presumptive septicemia should be immediately treated with parentral administration of bactericidal antibiotics for 10 to 15 days in appropriate dose, polymorphnuclear leukocyte transfusion particularly in neutropenic neonates and exchange transfusion for severe septicemia with complications.

- Synthetic L-thyroxin in a dose of 10 to 12 micrograme/kg/day is the treatment of choice for hypothyrodism in the newborn.

- Prophylactic management is recomended for, Rh hemolytic disease of the newborn by intramuscular injection of anti-DIg in a proper dose and time, for hypothermia by prevention of heat loss, sufficient calories and oxygen, and also for hypoglycemia by early feeding of newborn infants and minibolus therapy for symptomatic cases.

It is also recomended that infants born to addict mothers, to be initially admitted to the high risk nursery for close observation and treatment of the withdrawal symptoms.

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