INTRODUCTION

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Respiratory distress from a variety of causes is noted in a number of infants; if accompanied by hypoxia, it is the most common cause of death and also carries the highest morbidity in terms of neurologic sequelae (Bauman,1959).

However, respiratory distress syndrome usually refers to a specific disease entity found commonly (though not exclusively) in immature infants. Called by a variety of names- hyaline membrene disease, pulmonary hypoperfusion syndrome,pulmonary syndrome of the newborn-it is difficult to define,since the etiology of the syndrome is undetermined. The respiratory system is primarily involved and the onset of the disease is generally occurs at delivery (Miller1962), progressing rapidly to death or resolution by about 72 hrs. of age.The lungs of infants dying from this disease are airless when air is introduced to them,they fail to expand fully at ordinary inspiratory pressures of 35 to 45 cm H_2O.On expiration they empty almost completely,again becoming airless (Gruenwald,1965).

Blood gas analysis is probably the single most useful test of pulmonary function (Wood,1983). The ultimate goal to be achieved in assisting ventilation of the newborn is to provide optimal gas exchange while causing minimal damage to the lungs or interference with the circulation(Reynolds,1974 and Gottschalk et al .,1980).