

## **SUMMARY**

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Heart failure is a significant cause of mortality particularly during the first year of life.

When heart failure occurs in the neonatal period it is usually due to structural congenital heart disease such as patent ductus arteriosus, coarctation of the aorta, ventricular and atrial septal defects, aortic and pulmonary stenosis, Tricuspid regurgitation and transposition of great arteries and total anomalous pulmonary venous return.

However, heart failure in the neonate may be due to other causes than structural heart disease which include myocarditis, arrhythmias, glycogen storage disease, anaemia, systemic or pulmonary hypertension, arteriovenous fistulae, septicaemia, congenital thyrotoxicosis, hypoxemia, hypoglycemia and hypocalcaemia.

From the pathophysiological point of view the etiological factors of heart failure can be classified into 3 categories:

1. Volume - pressure loading of the myocardium.
2. Primary depression of contractile element function .
3. Arrhythmias.

In the neonatal period heart failure gives rise to a distinctive clinical presentation. Common symptoms and signs are feeding difficulties, tachypnea, tachycardia,

pulmonary rales and rhonchi, liver enlargement, and cardiomegaly. Less common manifestations include increase in systemic venous pressure, peripheral oedema, ascites, pulsus alternans, gallop rhythm, and inappropriate sweating. Pleural and pericardial effusions are very rare.

Rapid and accurate diagnosis is a prime importance since the appropriate management is often dependent upon the specific cause.

The diagnostic approach should include good history taking, complete physical examination and chest roentgenogram. The electrocardiogram is of little use unless there is an arrhythmia. The echocardiogram and radionuclear angiography represent good non invasive methods of diagnosis. Cardiac catheterization and angiocardiology are mainly valuable preoperative procedures.

The management of heart failure in the newborn rests primarily on the utilization of cardiac glycosides and diuretics. However, surgical intervention may be called when medical measures fail to control adequately the clinical manifestations.