CONCLUSION AND RECOMMENDATIONS

In the present work we found that the preterm infants values for VCF were high and those for wall stress were low, as compared to full term but the differences were not significant. So the preterm infants had a higher pump function at low after load. There was a significant -ve correlation between wall stress and VCF in preterm and fullterm infants. Also the complicated group of preterm had higher VCF and lower ESWS (when compared with full term group or non complicated preterm group).

A linear regression relating the VCF and wall stress was relatively steeper in non complicated preterm group compared with full term so the preterm infant particulary non complicated group could have greater sensitivity to changes in after load and this may be useful in managing neonates. Such information is also helpful in monitoring responses to inotropic agents or drugs affecting after load.

The present work demonstrated that the mean pulmonary artery pressure of preterm infants was significant higher than those with fullterm while the right ventricular function expressed by ejection fraction was significant lower in complicated group of preterm than full term infants.

So the VCFc-end systolic wall stress relation is useful in estimation of left ventricular contractile state non-invasively. Also the left ventriculer performance in preterm infant is subject to sudden deterioration in the face of increased after load particulary non complicated group.

So we conclude that hypotension of preterm particulary non complicated group not only require fluids, dopamine or dobutamine administration but also could be improve by use of vasodilators as sodium nitroprussid for after load reduction. Also further studies are needed to follow up outcome of left ventricular contractile state in preterm infants.