SUMMARY AND CONCLUSION

Hypertension is the major risk factor for coronary, cerebral, and renal vascular diseases.

There is a strong familllial incidence of essential hypertension, also the young children of hypertensive parents tend to have cardiovascular changes which predict future blood pressure level.

The present study was designed to assess and understand the hemodynamic changes, if any, in hypertension prone children before the actual manifestation of clinical hypertension.

The study population composed of 54 normotensive children with family history of essential hypertension and 20 normotensive children without family history of essential hypertension, age and sex matched control subjects.

All children included in this study were subjected to the following:

- Through clinical evaluation.
- Echo-Doppler study.
- Exercise test.

Our results revealed that resting HR, and DBP, together with HR, SBP, and DBP through out exercise test were statistically increase among the hypertensive-prone children.

In these study, the LVM was statistically increased in children with family history of hypertension. Together with alternation in diastolic function (reversed E/A ratio) which show statistical significance in the hypertensive -prone children.

The BMI was statistically correlated with HR and SBP at rest and throughout exercise and although with LVM and E/A ratio.

The LVM was significantly correlated with age, DBP and E/A ratio.

Age was significantly correlated with HR, SBP and DBP throughout exercise test.

These findings indicate that an altered hemodynamic regulatory mechanism may exist before the clinical detection of hypertension.

Thus the echocardiographic measurements of LVM and diastolic dysfunction may provide an integrated view of elevation of blood pressure that occur throughout a long period. LVM and exercise blood pressure responces in childhood may thus be important predictors of subsequent hypertension and it is complications in later years.