Conclusion
CONCLUSION

Hypertension is one of the most important health problem in the world and it affects Heart, Kidneys, Eyes, Brain and almost all organs of the body, various risk factors are associated with hypertension these are mainly Diabetes, Obesity, Dyslipidemia, Smoking and Alcohol.

This study was done in middle aged adults to analysed whether kidney size is affected by hypertension per se or risk factors associated with hypertension. The renal measurements were performed by abdominal ultrasound. Genders were analysed separately. Following conclusions have been derived:

- Maximum number of cases belonged to 51-55 years and their mean age was 52.08 ± 5.5 years.
- There was male preponderance. 65% cases were male and 35% were female.

MALE STUDY GROUP:

- Hypertensive men had larger kidney size (111.44 ± 1.77 mm) than control (109.85 ± 1.65) and difference was statistically significant (p<0.05).
- Blood pressure did not have significant effect on renal size (p 0.05).
- Body surface area had significant effect on renal size (p>0.0002) larger kidney size observed in subjects having more body surface area

- Body mass index had significant effect on kidney size (p=0.0008) 69% male subjects were overweight (BMI > 250) in our study. Larger kidney size was observed in subjects having increased BMI

- Diabetic subjects had larger kidney size (112.6±1.7 mm) than non diabetic subjects (110.1±0.83 mm). The difference was statistically significant. Fasting blood glucose had significant effect on kidney size (p=0.007) Larger kidney size was observed in subjects with higher fasting blood glucose level

- Lipid profile abnormalities were observed in hypertensive male subjects. Increased total cholesterol (>200mg/dl) was present in 50% cases, increased LDL (>100 mg/dl) was presenting 19.2% cases and increased Triglyceride level (>150 mg/dl) was observed in 42.3% cases. No significant effect of lipid abnormalities on kidney size was observed

- Smokers had larger kidney size (111.2±1.21 mm) than non smokers (108.7±1.35 mm). The difference was statistically significant (p<0.05) kidney size increased with number of cigarettes smoked.
cigarettes smoked per day. On regression analysis smoking had significant effect on kidney size (p=0.02)

- Significant effect of alcohol was observed on kidney size (p 0.01) Alcoholic subject had larger kidney size

**FEMALE STUDY GROUP**:

- Hypertensive women had larger kidney size (107.03±3.52 mm) than control (105.10±3.86). The difference was borderline significant (p=0.08)

- No effect of blood pressure on kidney size observed in female study group

- As in female study group, female subjects with more body surface area had larger kidney size and the effect was highly significant (p=0.0001)

- 64% female were over weight (BMI > 25.0) BMI had significant effect on kidney size (p=0.004). Larger kidney size was observed in female subjects with increased BMI

- In female study group diabetic subjects had larger kidney size (109.42±1.88 mm) than Non diabetic subjects (105.25±3.62 mm). The difference was statistically significant (p<0.05). Fasting blood glucose label had significant effect on kidney size
(p=0.002) Larger kidney size observed in subjects with higher fasting blood glucose level

- Lipid profile abnormalities were also observed in female hypertensive subjects. Increased total cholesterol was observed in 57.14%, increased LDL was present in 21.42% and increased triglyceride was present in 64% subjects. No significant effect of lipid profile abnormalities observed on kidney size.

We conclude that significant factors affecting kidney size were body surface area, body mass index, diabetes, smoking and alcohol. The hypertensive subjects had larger kidney size than the controls mainly because more frequent associated overweight, abnormal blood glucose test values, smoking and alcohol intake.