RESULTS

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Statistical methods were done after ***Kuzma (1984)***. This study included 30 hypertensive patients and 10 normal persons as control. They were divided into 2 groups:

Group I : (The normotensive group).

This group included 10 normal volunteer persons. There were 5 females (50%) and 5 males (50%). Their ages ranged between (35-55) years (mean ± S.D.: 42.8 ± 6.55) as shown in table (1). They were selected from auxiliary workers at Benha University Hospital. The blood pressure in this group was below 135/ 85mm Hg in all cases, with mean systolic B.P. 120.5 mm Hg (mean ± S.D : 120.5 ± 6. 85), and mean diastolic B.P 76.5mm Hg (mean ± S.D. : 76.5 ± 4.1). serum creatinine values (means ± S.D. : 0. 865 ± 0.22) were within the normal range.

Group II : (The hypertensive group):

This group included 30 hypertensive patients. There were 15 females (50%) and 15 males (50%). Their ages ranged between (38 –55) years (mean ± S.D: 45.9 ± 5.5) as shown in table (2). They were selected from The attendants of the outclinic of medicine and the inpatient of Benha University Hospital. The blood pressure was equal or greater than 140 /90 mm Hg with mean systolic B.P 158.5 mm Hg (mean ± S.D : 158.5 ± 10) and mean diastolic B.P. 95.8 mm Hg (mean ± S.D. : 95.8 ± 4. 4). Serum creatinine values (mean ± S.D. : 0.94 ± 0.18) were within normal range.

Table (1): Shows the clinical and laboratory data in the control group (Gr. I). Ages ranged from 35 to 55 years with a mean of (42.8 ± 6.55). Sex was equal M/F : 5/5. Systolic B.P ranged from 110 to 130 mm Hg, with a mean of (120.5 ± 6.85). Diastolic B.P ranged from 70 to 80 mm Hg, with a mean of (76.5 ± 4.1). Serum calcium ranged from 8.1 to 9.4 mg /dl, with a mean of (8.65 ± 0.47). Serum potassium ranged from 3.5 to 4.0 m Eq /L with a mean of (3.74 ± 0.15). Serum sodium ranged from 137 to 150 m Eq/L, with a mean of (143.7 ± 4.9). Urinary calcium ranged from 114 to 145.2 mg /day, with a mean of (136.56 ± 10.39). Serum creatinine ranged from 0.5 to 1.2 mg/ dl, with a mean of (0.865 ± 0.22). Serum 1.25 $(OH)_2$ D ranged from 25.1 to 41.5 pg/ ml, with a mean of (33.58 ± 5.68). serum parathyroid hormone (PTH) ranged from 12.2 to 41.9 pg/ml, with a mean of (21.83 ± 9.87). Plasma renin activity (PRA) ranged from 1.35 to 2.62 ng / ml /h, with a mean of (2.03 ± 0.4).

Table (2): Shows the clinical and laboratory data in the hypertensive group (Gr. II). Ages ranged from 38 to 55 years, with a mean of (45.9 ± 5.5). Sex was equal M/ F: 15 / 15. Systolic B.P ranged from 145 to 175 mm Hg, with a mean of (158.5 ± 10). Diastolic B.P ranged from 90 to 105 mm Hg, with a mean of (95.8 ±4.4). Serum calcium ranged from 6.9 to 9.9 mg / dl, with a mean of (8.5 ± 0.6). Serum potassium ranged from 3.5 to 4.3m Eq /L, with a mean of (3.81 ± 0.2). Serum sodium ranged from 136 to 150m Eq/L, with a mean of (142.2 ± 4.5). Urinary calcium ranged from 123.2 to 245 mg/ day, with a mean of (174 ± 34.2). Serum

creatinine ranged from 0.7 to 1.4 mg / dl, with a mean of (0.94 ± 0.18). Serum 1.25 $(OH)_2$ D ranged from 6.2 to 69.2 pg /ml, with a mean of (43.8 ± 15). Serum parathyroid hormone (PTH) ranged from 12 to 125.9 Pg/ml, with a mean of (54.2 ± 35.9). Plasma renin activity (PRA) ranged from 1.15 to 3.1 ng/ ml /h, with a mean of (1.85 ± 0.5).

Table (3): shows that 24 hours urinary calcium was greater than the upper normal limit of controls (group I) in 70% (21 /30) of essential hypertensive patients (group II). The highest 24 hours urinary calcium values was 245mg/day and 146 mg/ day in hypertensive and control groups respectively.

Table (4): shows that serum 1,25 $(OH)_2D$ was greater than the upper normal limit of controls (group I) in 40% (12/30) of essential hypertensive patients (group II). The highest serum 1,25 $(OH)_2D$ values was 69.2 Pg/ml and 41.5 Pg/ml in hypertensive and control groups respectively.

Table (5): shows that serum PTH was greater than the upper normal limit of controls (group I) in 60 % (18/30) of essential hypertensive patients (group II). The highest serum PTH values was 125.9 Pg/ml and 41.9 Pg/ml in hypertensive and control groups respectively.

Table (6): shows that PRA was lower than the lower normal limit of controls (group I) in 13% (4/30) of essential hypertensive patients

(group II). The lowest PRA values was 1.2 ng/ml /h and 1.35 ng/ ml / h in hypertensive and control groups respectively.

Table (7): Shows comparison between mean values of ages, systolic B.P, and diastolic B.P in the hypertensive group and the control group. The mean age value in the control group (Gr. I) was (42.8 ± 6. 55) years. This value is lower than the mean values of ages of the hypertensive group (Gr. II) (45.9 ± 5.5) years, but the comparison is statistically non –significant (P > 0.0 5).

The mean systolic B.P value in the control group was (120.5 ± 6.85) mm Hg. This value is significantly lower than the mean value in the hypertensive group (158.5 ± 10) mm Hg (P < 0.001).

The mean diastolic B.P value in the control group was (76. 5 ± 4.1) mm Hg. This value is significantly lower than the mean value in the hypertensive group (95.8 ± 4.4)mm Hg (P < 0.001).

Table (8): Shows a comparison between the mean values of serum potassium, sodium, creatinine, and PRA (Plasma renin activity) in the hypertensive group and the control group. The mean serum potassium value in the control group was (3.74 ± 0.15) m Eq/L . This value is lower than the mean value of serum potassium in the hypentensive group (3.81 ± 0.2)m Eq/L, but the comparison is statistically non- significant (P > 0.05).

The mean serum sodium value in the control group was (143.7 ± 4.9)m Eq/L, and it was (142.2 ± 4.5) m Eq /L in the hypentensive group. This comparison is statistically non–significant (P> 0.05).

The mean value of serum creatinine in the control group was (0.87± 0.22) mg/dl, and it was (0.94 ± 0.18) mg/ dl in the hypertensive group. This comparison is statistically non-significant (P> 0.05).

The mean plasma renin activity (PRA) value was (2.03 ± 0.4) ng/ml /h in the control group, and (1.85 ± 0.5) in the hypertensive group. This comparison is statistically non- significant (P > 0.05).

Table (9): Shows a comparison between the mean values of serum calcium, 1.25 $(OH)_2D$, PTH, and urinary calcium in the hypertensive group and the control group.

The mean serum calcium value in the control group was (8.65 ± 0.47) mg /dl. This value is higher than the mean value of serum calcium in the hypertensive group (8.5 ± 0.6) mg /dl. But this comparison is statistically non-significant (P > 0.05).

The mean value of urinary calcium in the control group was (136.56 ± 10.39) mg / day. This value is significantly lower than the mean value of urinary calcium in the hypertensive group (174 ± 34.2) (P < 0.001).

The mean serum 1.25 (OH)2 D value in the control group was (33.58 ± 9.87) pg/ ml. this value is significantly lower than the mean serum 1.25 (OH)2 D in the hypertensive group (43.8 ± 15) (P< 0.005).

The mean serum parathyroid hormone value (PTH) in the control group was (21.83 ± 9.87). this value is significantly lower than the

mean value of serum PTH in the hypertensive group (54.2 ± 35.9) pg / ml (P<0.001).

Tables (10), (11) , (12) , (13) and (14) show correlation between ages of hypertensive patients and their systolic B,P, diastolic B.P, 24 hours urinary calcium, serum 1,25 $(OH)_2D$ and serum PTH. This correlation is statistically non-significant.

Tables (15), (16), (17) and (18) show correlation between systolic B.P of hypertensive patients and their 24 hours urinary calcium, serum 1,25 $(OH)_2D$, serum PTH and PRA. This correlation is statistically non-significant.

Tables (19), (20), (21) and (22) show correlation between diastolic B.P of hypertesive patients and their 24hours urinary calcium, serum 1,25 $(OH)_2D$, serum PTH and PRA. This correlation is statistically non- significant.

Tables (23), (24), (25) and (26) show correlation between serum calcium of hypertensive patients and their 24 hours urinary calcium, serum 1,25 $(OH)_2D$, serum PTH and PRA. This correlation is statistically non- significant.

In tables (27), (28) and (29) correlation was done between serum PTH, serum 1.25 (OH)2 D and urinary calcium in the hypertensive group. This correlation is statistically non-significant.

Tables (30), (31) and (32) show correlation between PRA of hypertensive patients and their 24hours urinary calcium, serum 1,25$(OH)_2D$ and serum PTH. This correlation is statistically non significant.