Results

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The present study included a group of patients (40 patients) were come to our outpatient clinics of Benha University Hospital, presenting by hypertension ,then by non-invasive ambulatory blood pressure monitoring they are classified into White Coat Hypertension (W.C.H..) group, include 20 patients (13 females and 7 males) and Sustained Hypertension (S.H.) group, include 20 patients (9 females and 11 males).

Regarding , the base line clinical characteristics of the risk factors of hypertension among the studied groups of patients, Table (1) shows:

- ***Age***: There is a statistically significant difference between both groups regarding age distribution ($p<0.05$). Where the mean value of the age in the W.C.H. group is (37.2 ± 13.3) and the mean value in the S.H. group is (52.1 ± 8.4) and the patients aged < 30 ys. constitutes 45.0% of the W.C.H. group in comparison to 0.0% of the S.H. group, patients aged 30-45 ys. constitutes 30.0% of the W.C.H. group in comparison to 20.0% of the S.H. group and patients aged > 45ys. constitutes 25.0% of the W.C.H. group in comparison to 80.0% of the S.H. group.
- ***Sex***: Males constitutes 35.0% of the W.C.H. group in comparison to 55.0% of the S.H. group, with a statistically insignificant difference between both groups ($p>0.05$).
- ***Diabetes Mellitus*** : 10.0% of the W.C.H. group are diabetics in comparison to 40% of the S.H. group, with a statistically significant difference ($p< 0.05$).

- ***Smoking among males***: Smoker males constitutes 85.7% of the W.C.H. group in comparison to 63.6% of the S.H. group, with a statistically insignificant difference ($p>0.05$).
- ***Post- menopausal condition among females***: Post-menopausal women constitutes 38.4% of the W.C.H. group in comparison to 77.8% of the S.H. group, with a statistically significant difference ($p<0.05$).
- ***Family history of hypertension***: There is +ve family history of hypertension in 70.0% of the W.C.H. group in comparison to 60.0% of the S.H. group, with a statistically insignificant difference ($p>0.05$).
- ***Body mass index***: There is a statistically highly significant difference between both groups regarding body mass index ($p<0.01$). Where the mean value of B.M.I in the W.C.H. group is (30.1 ± 2.9) and the mean value of B.M.I in the S.H. group is (34.0 ± 3.2) and the patients with B.M.I. < 30 constitutes 40.0% of the W.C.H. group in comparison to 10.0% of the S.H. group, patients with B.M.I. 30-33 constitutes 50.0% of the W.C.H. group in comparison to 15.0% of the S.H. group and patients with B.M.I. > 33 constitutes 10.0% of the W.C.H. group in comparison to 75.0% of the S.H. group.

Table (1) : Base line clinical characteristics of the risk of hypertension among the studied groups of patients.

Studied Groups / R.F.	W.C.H.. (n = 20)		S.H. (n = 20)		Test of Significance
	NO.	%	NO.	%	
Age (years) : < 30 ys.	9	45.0	0	0.0	
30-45 ys.	6	30.0	4	20.0	$X^2 = 15.162$
> 45 ys.	5	25.0	16	80.0	$P < 0.05$
Sex : Males	7	35.0	11	55.0	$X^2 = 1.616$
Females	13	65.0	9	45.0	$P > 0.05$
Body Mass Index < 30	8	40.0	2	10.0	
(B M I) 30-33	10	50.0	3	15.0	$X^2 = 17.310$
> 33	2	10.0	15	75.0	$P < 0.01$
D . M .	2	10.0	8	40.0	$Z = 2.191$
					$P < 0.05$
Smoking among males	6	85.7	7	63.6	$Z = 1.019$
					$P > 0.05$
Post menopausal among females	5	38.4	7	77.8	$Z = 1.971$
					$P < 0.05$
Family history of hypertension	14	70.0	12	60.0	$Z = 0.663$
					$P > 0.05$

W .C . H. = White Coat Hypertension.

S .H. = Sustained Hypertension.

D.M. = Diabetes Mellitus.

Regarding, blood pressure (mmHg) and heart rate (beat/min) measurements among the studied groups of patients,

Table (2) shows:

- ***At clinic:***

- Regarding systolic B.P., there is a statistically insignificant difference between both groups ($p>0.05$).

  Where the mean value of systolic B.P. measurements in the W.C.H. group is (159.2 ± 8.5) and that in the S.H. group is (161.5 ± 8.4).

- Regarding diastolic B.P., there is a statistically significant difference between both groups ($p<0.05$).

  Where the mean value of diastolic B.P. measurements in the W.C.H. group is (95.2 ± 4.7) and that in the S.H. group is (100.0 ± 6.7).

- Regarding clinic H.R., there is a statistically insignificant difference between both groups ($p>0.05$).

  Where the mean value of H.R. in the W.C.H. group is (90.9 ± 6.4) and that in the S.H. group is (91.3 ± 5.6).

- ***At home*** :

- Regarding systolic B.P., there is a statistically highly significant difference between both groups ($p<0.01$).

  Where the mean value of systolic B.P. measurements in the W.C.H. group is (124.7 ± 9.1) and that in the S.H. group is (155.2 ± 12.2).

- Regarding diastolic B.P., there is a statistically highly significant difference between both groups ($p< 0.01$).

  Where the mean value of diastolic B.P. measurements in the W.C.H. group is (75.7 ± 5.7) and that in the S.H. group is (95.8 ± 5.9).

- *Average 24-h. A.B.P.M.:-*

- Regarding systolic B.P., there is a statistically highly significant difference between both groups ($p< 0.01$).

  Where the mean value of systolic B.P. measurements in the W.C.H. group is (117.8 ± 7.7) and that in the S.H. group is (148.8 ± 5.5).

- Regarding diastolic B.P. , there is a statistically highly significant difference between both groups ($p< 0.01$).

  Where the mean value of diastolic B.P. measurements in the W.C.H. group is (77.6 ± 4.1) and that in the S.H. group is (96.6 ± 4.0).

- Regarding 24-h. H.R., there is a statistically significant difference between both groups ($p< 0.05$).

  Where the mean value of H.R in the W.C.H. group is (83.3 ± 6.1) and that in the S.H. group is (88.5 ± 5.4).

- ***Average Daytime A.B.P.M.:***

- Regarding systolic B.P., there is a statistically highly significant difference between both groups ($p< 0.01$).

  Where the mean value of systolic B.P. measurements in the W.C.H. group is (117.6 ± 6.5) and that in the S.H. group is (150.1 ± 5.3).

- Regarding diastolic B.P., there is a statistically highly significant difference between both groups ($p< 0.01$).

  Where the mean value of diastolic B.P. measurements in the W.C.H. group is (78.1 ± 4.0) and that in the S.H. group is (97.4 ± 3.9).

- Regarding daytime H.R., there is a statistically significant difference between both groups ($p< 0.05$).

  Where the mean value of H.R. in the W.C.H. group is (84.8 ± 7.0) and that in the S.H. group is (89.1 ± 5.9).

- ***Average Nighttime A.B.P.M.:***

- Regarding systolic B.P., there is a statistically highly significant difference between both groups ($p < 0.01$).

  Where the mean value of systolic B.P. measurements in the W.C.H. group is (117.1 ± 6.1) and that in the S.H. group is (140.1 ± 6.6).

- Regarding diastolic B.P., there is a statistically highly significant difference between both groups ($p < 0.01$).

  Where the mean value of diastolic B.P. measurements in the W.C.H. group is (76.2 ± 5.4) and that in the S.H. group is (90.5 ± 5.1).

- Regarding nighttime H.R., there is a statistically insignificant difference between both groups ($p > 0.05$).

  Where the mean value of H.R. in the W.C.H. group is (71.9 ± 5.7) and that in the S.H. group is (72.1 ± 6.4).

Table (2) : Comparison between the studied groups of patients regarding blood pressure measurements (mmHg) and heart rate (beat / min)

Parameter \ Studied Groups	W.C.H.. (n = 20) $\bar{x} \pm$ S.D.	S.H. (n = 20) $\bar{x} \pm$ S.D.	t	p
Clinic				
- Systolic B.P. (mmHg)	159.2 ± 8.5	161.5 ± 8.4	0.841	> 0.05
- Diastolic B.P. (mmHg)	95.2 ± 4.7	100.0 ± 6.7	2.594	< 0.05
- H.R. (beat / min.)	90.9 ± 6.4	91.3 ± 5.6	0.2093	> 0.05
Home				
- Systolic B.P. (mmHg)	124.7 ± 9.1	155.2 ± 12.2	8.966	< 0.01
- Diastolic B.P. (mmHg)	75.7 ± 5.7	95.8 ± 5.9	10.937	< 0.01
Average 24-h A.B.P.M.				
- Systolic B.P. (mmHg)	117.8 ± 7.7	148.8 ± 5.5	14.689	< 0.01
- Diastolic B.P. (mmHg)	77.6 ± 4.1	96.6 ± 4.0	14.808	< 0.01
- H.R. (beat / min.)	83.3 ± 6.1	88.5 ± 5.4	2.8043	< 0.05
Average Daytime A.B.P.M.				
- Systolic B.P. (mmHg)	117.6 ± 6.5	150.1 ± 5.3	17.421	< 0.01
- Diastolic B.P. (mmHg)	78.1 ± 4.0	97.4 ± 3.9	15.469	< 0.01
- H.R. (beat / min.)	84.8 ± 7.0	89.1 ± 5.9	2.1122	< 0.05
Average Nighttime A.B.P.M.				
- Systolic B.P. (mmHg)	117.1 ± 6.1	140.1 ± 6.6	11.471	< 0.01
- Diastolic B.P. (mmHg)	76.2 ± 5.4	90.5 ± 5.1	8.572	< 0.01
- H.R. (beat / min.)	71.9 ± 5.7	72.1 ± 6.4	0.0784	> 0.05

* B.P. = Blood Pressure .
* H.R. = Heart Rate.
* A.B.P.M. = Ambulatory Blood Pressure Monitoring.

- ***Regarding , E.C.G. findings , Table (3) shows that*** the patients with left ventricular hypertrophy constitutes 75.0% of the W.C.H. group in comparison to 80.0% of the S.H. group, there is a statistically insignificant difference between both groups ($p > 0.05$).

Table (3) : comparison between the studied groups regarding E.C.G. findings.

Studied Groups / E.C.G. findings.	W.C.H..		S.H.		Total	
	NO.	%	NO.	%	NO.	%
L.V.H.	15	75.0	16	80.0	31	77.5
NO L.V.H.	5	25.0	4	20.0	9	22.5
Total	20	100.0	20	100.0	40	100.0

($X^2 = 0.143$ ، $P > 0.05$)

* E.C.G. = Electro cardiogram.

* L.V.H. = Left Ventricular Hypertrophy.

Regarding , the echocardiographic findings among the studied groups of patients, Table (4) shows:

- L.V.M.I. (g/m^2): There is a statistically highly significant difference between both groups regarding L.V.M.I. ($p< 0.01$).

  Where the mean value of L.V.M.I. in the W.C.H. group is (96.9 ± 30.7 g/m^2) and that in the S.H. group is (142.6 ± 18.1 g/m^2).

- E.F.% : There is a statistically insignificant difference between both groups regarding E.F.% ($p> 0.05$).

  Where the mean value of E.F.% in the W.C.H. group is (64.1 ± 5.8) and that in the S.H. group is (60.6 ± 6.8).

- E.S.D. (cm) : There is a statistically highly significant difference between both groups regarding E.S.D. ($p< 0.01$).

  Where the mean value of E.S.D. in the W.C.H. group is (2.82 ± 0.19) and that in the S.H. group is (3.38 ± 0.48).

- E.D.D. (cm) : There is a statistically significant difference between both groups regarding E.D.D.($p< 0.05$).

  Where the mean value of E.D.D. in the W.C.H. group is (4.53 ± 0.46) and that in the S.H. group is (4.89 ± 0.55).

- S.W.T. (cm) : There is a statistically insignificant difference between both groups regarding S.W.T. ($p> 0.05$).

  Where the mean value of S.W.T. in the W.C.H. group is (1.16 ± 0.16) and that in the S.H. group is (1.23 ± 0.19).

- P.W.T. (cm) : There is a statistically insignificant difference between both groups regarding P.W.T. ($p> 0.05$).

  Where the mean value of P.W.T. in the W.C.H. group is (1.09 ± 0.18) and that in the S.H. group is (1.14 ± 0.19).

- The ratio between early to late diastolic inflow velocities (E/A ratio): There is a statistically insignificant difference between both groups regarding E/A ratio ($p > 0.05$).

  Where the mean value of E/A ratio in the W.C.H. group is (1.11 ± 0.18) and that in the S.H. group is (1.11 ± 0.16).

Table (4) : Echocardiographic findings among the studied groups of patients.

Studied Groups / Finding	W.C.H.. (n = 20)	S.H. (n = 20)	t	p
	$\bar{x}$ ± S.D.	$\bar{x}$ ± S.D.		
L.V.M.I. (g/m^2)	98.5 ± 25.6	142.6 ± 18.3	6.2583	< 0.01
E.F. %	64.1 ± 5.8	60.4 ± 6.9	1.9693	< 0.05
E. S. D. (cm)	2.82 ± 0.19	3.38 ± 0.48	4.815	< 0.01
E. D. D. (cm)	4.53 ± 0.46	4.89 ± 0.55	2.2532	< 0.05
S. W. T (cm)	1.16 ± 0.16	1.23 ± 0.19	1.3732	> 0.05
P. W. T. (cm)	1.09 ± 0.18	1.14 ± 0.19	0.7743	> 0.05
E/A ratio	1.11 ± 0.18	1.11 ± 0.16	0.0281	> 0.05

* L.V.M.I. = Left Ventricular Mass Index.

* E.F. = Ejection Fraction.

* E.S.D. = End Systolic Dimension.

* E.D.D. = End Diastolic Dimension.

* S.W.T. = Septal Wall Thickness.

* P.W.T. = Posterior Wall Thickness.

- ***Regarding, laboratory findings, Table(5) shows the comparison between both groups.***

- Where the mean value of serum creatinine in the W.C.H. group is (1.00 ± 0.24) and that in the S.H. group is (1.20 ± 0.28), with a statistically significant difference ($p< 0.05$).
- The mean value of fasting blood sugar in the W.C.H. group is (109.1 ± 15.5) and that in the S.H. group is (135.1 ± 38.2), with a statistically significant difference ($p< 0.05$).
- The mean value of serum cholesterol in the W.C.H. group is (192.1 ± 50.5) and that in the S.H. group is (208.0 ± 36.4), with a statistically significant difference ($p< 0.05$).
- The mean value of serum triglyceride in the W.C.H. group is (128.7 ± 39.6) and that in the S.H. group is (143.6 ± 36.3), with a statistically significant difference ($p< 0.05$).
- The mean value of serum uric acid in the W.C.H. group is (4.38 ± 0.74) and that in the S.H. group is (4.68 ± 0.75), with a statistically insignificant difference ($p> 0.05$).
- The mean value of microalbuminuria in the W.C.H. group is (17.4 ± 6.3) and that in the S.H. group is (32.7 ± 7.8), with a statistically highly significant difference ($p< 0.01$).

Table (5) : Comparison between the studied groups regarding laboratory findings.

Studied Groups / Variables	W.C.H.. (n = 20) $\bar{x}$ ± S.D.	S.H. (n = 20) $\bar{x}$ ± S.D.	t	p
Serum Creatinine mg/dl	1.00 ± 0.24	1.20 ± 0.28	2.503	< 0.05
Fasting Blood Sugar mg/dl	109.1 ± 15.5	135:1 ± 38.2	2.824	< 0.05
Serum Cholesterol mg/dl	192.1 ± 50.5	208.0 ± 36.4	1.142	< 0.05
Serum Triglycerides mg/dl	128.7 ± 39.6	143.6 ± 36.3	2.904	< 0.05
Serum Uric Acid mg/dl	4.38 ± 0.74	4.68 ± 0.75	1.294	> 0.05
Microalbuminuria mg/24hr.	17.4 ± 6.3	32.7 ± 7.8	6.803	< 0.01

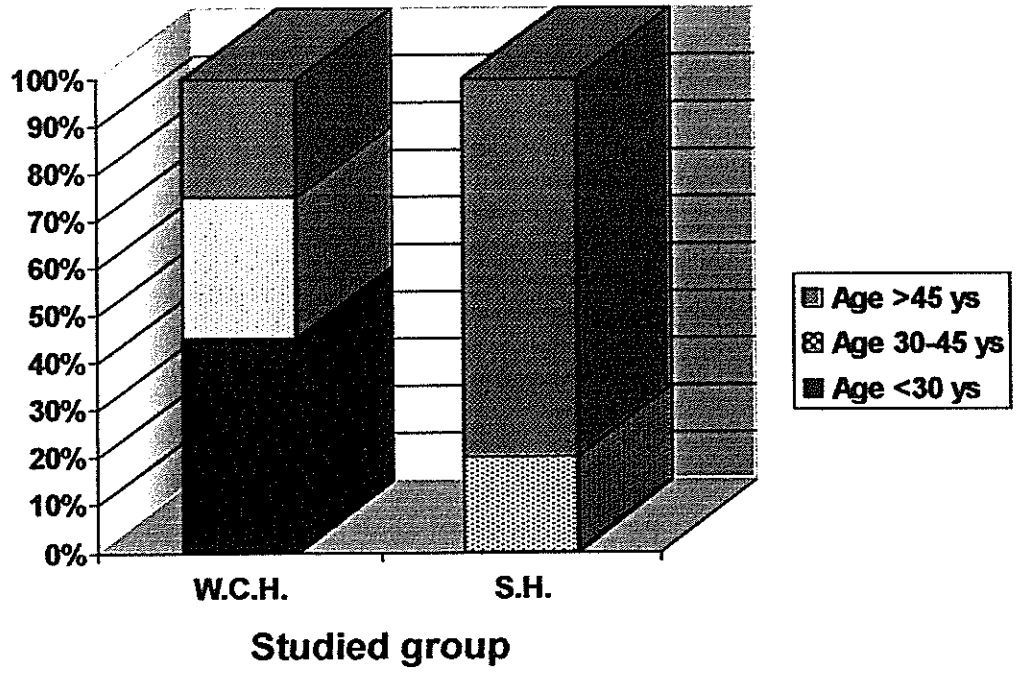
Regarding , the distribution of complications of hypertension, Table (6) shows the following :

- Ischemic Heart Diseas from ECG, there is 10.0 % of the W.C.H. group in comparison to 30.0% of the S.H. group, with a statistically insignificant difference ($p>0.05$)
- Retinopathy, there is 9 cases of the W.C.H. group shows optic disc edema , cotton – wool spots and there is another 2 cases of the W.C.H. group shows superficial retinal hemorrhages in added to optic disc edema and cotton – wool spots where there is 3 cases in the S.H. group shows narrowing of the retinal veins at arterio-venous crossing sites and superficial retinal hemorrhages and 10 cases shows optic disc edema and cotton-wool spots. So, there is 55.0% of the W.C.H. group in comparison to 65.0% of the S.H. group, with a statistically insignificant difference ($p>0.05$).
- History of C.V. Stroke was present in 5.0 % of the W.C.H. group in comparison to 15.0% of the S.H. group, This with a statistically insignificant difference ($p>0.05$).
- Renal Impairement, there is no cases appeared in the W.C.H. group in comparison to 5.0% of the S.H. group, This with a statistically insignificant difference ($p>0.05$).

Table (6): Complications of hypertension among the studied groups

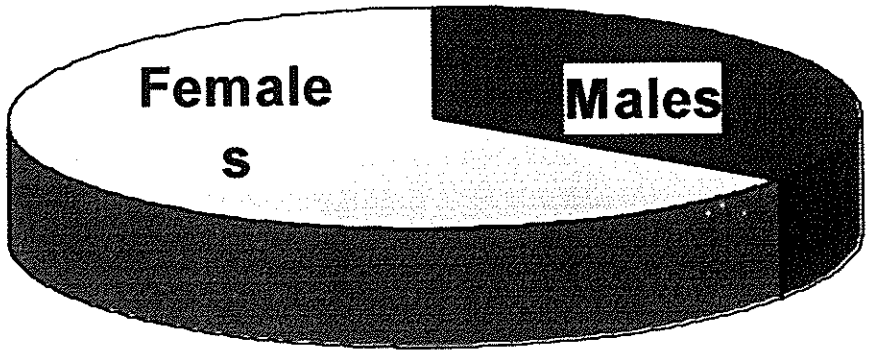
Studied Groups / Complications	W.C.H.. (n = 20)		S.H. (n = 20)		Z	P
	NO.	%	NO.	%		
Retinopathy	11	55.0	13	65.0	0.645	> 0.05
C.V. Stroke	1	5.0	3	15.0	1.054	> 0.05
Ischemic Heart Disease	2	10.0	6	30.0	2.372	> 0.05
Renal Impairement	0	0.0	1	5.0	1.013	> 0.05

Fig. (1): Age distribution among the studied groups.

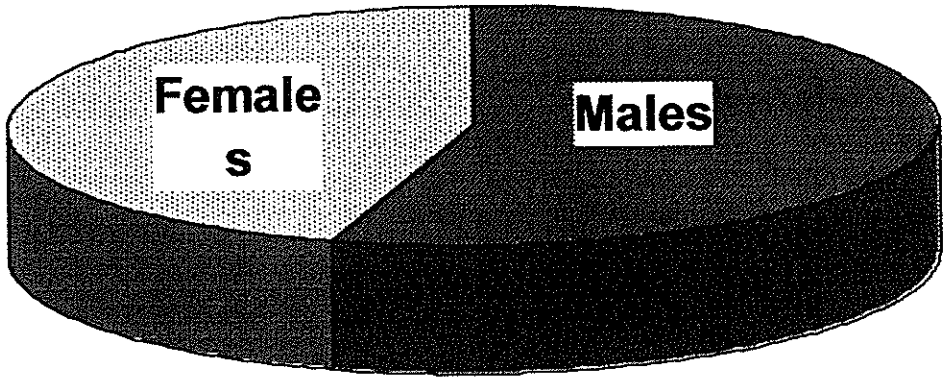


There is significant difference between the W.C.H. group and the S.H. group regarding age distribution as shown in table (1)

Fig. (2): Sex distribution of the studied groups.



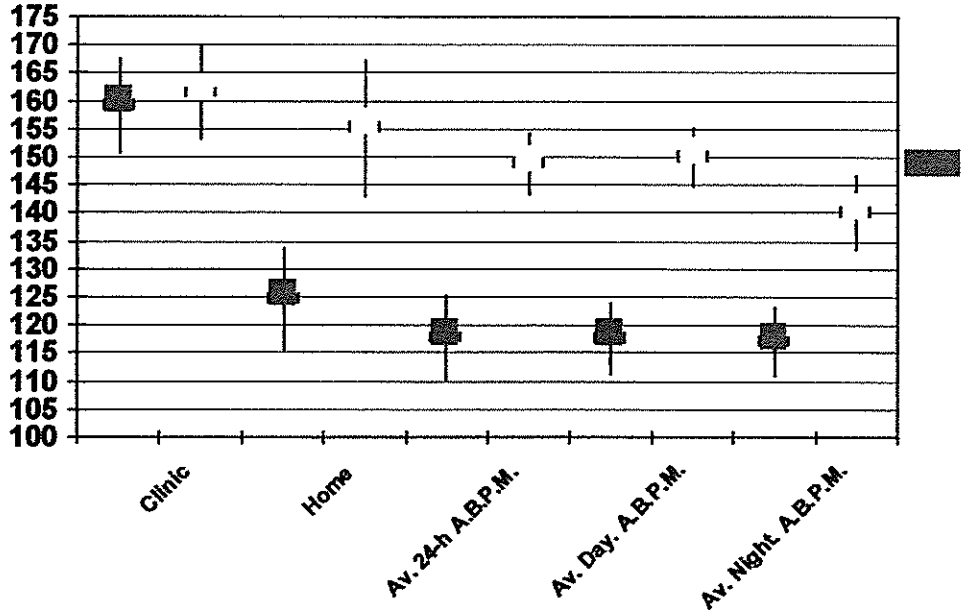
W.C.H.



S.H.

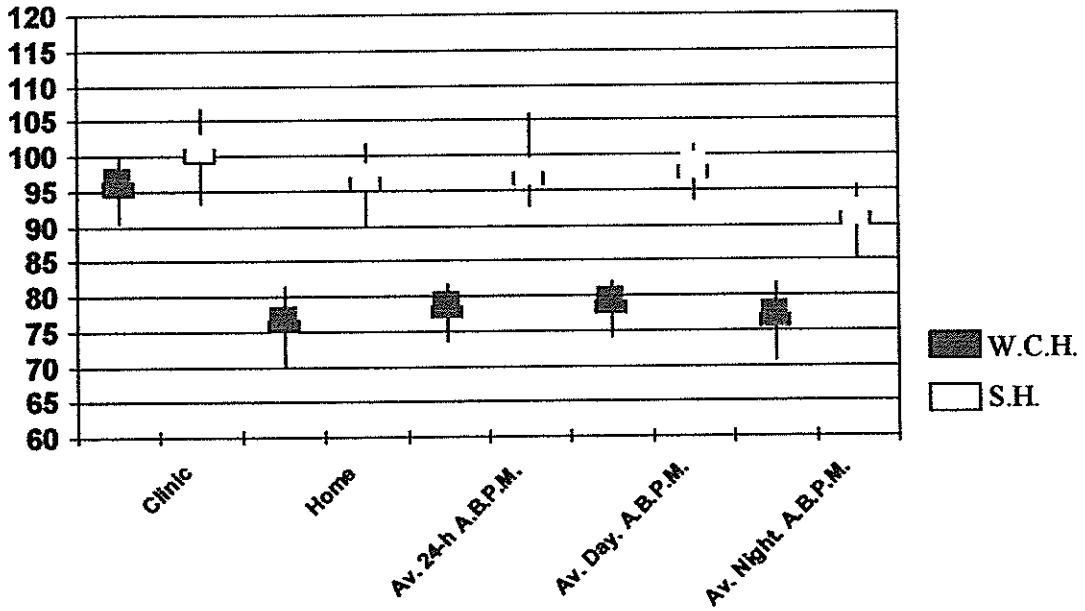
There is more prevalence of W.C.H. among females than males but this is a statistically insignificant among the studied groups as shown in table (1)

Fig. (3): Systolic blood pressure at different occasions among the studied groups.



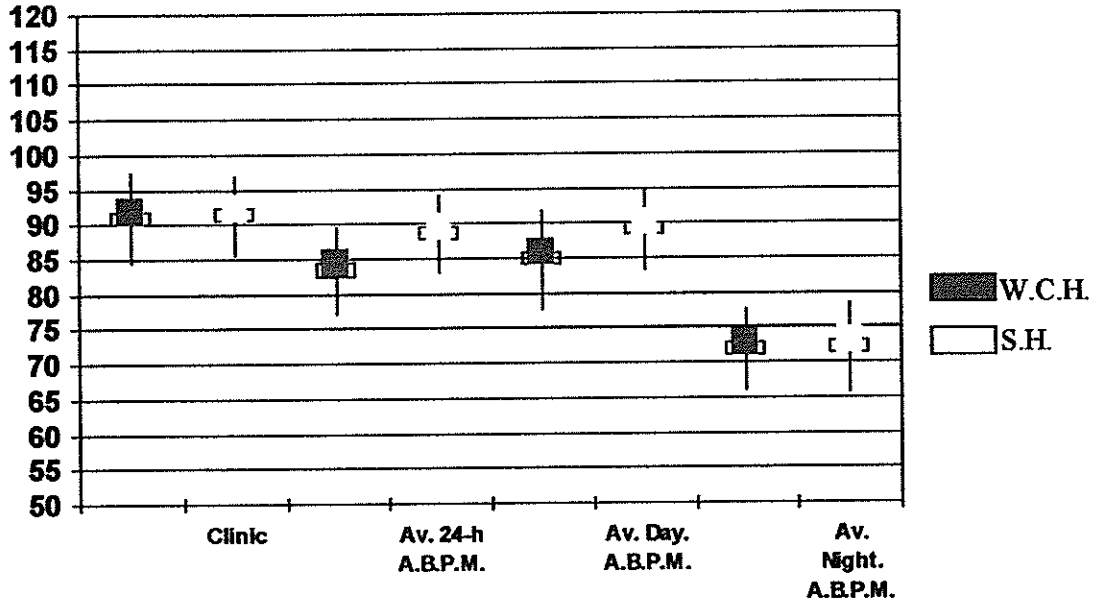
There is a statistically insignificant difference between both groups regarding systolic pressure measurements at clinic and there is a statistically highly significant difference in measurements at home and ambulatory B.P. as shown in table (2).

Fig. (4): Diastolic blood pressure at different occasions among the studied groups.



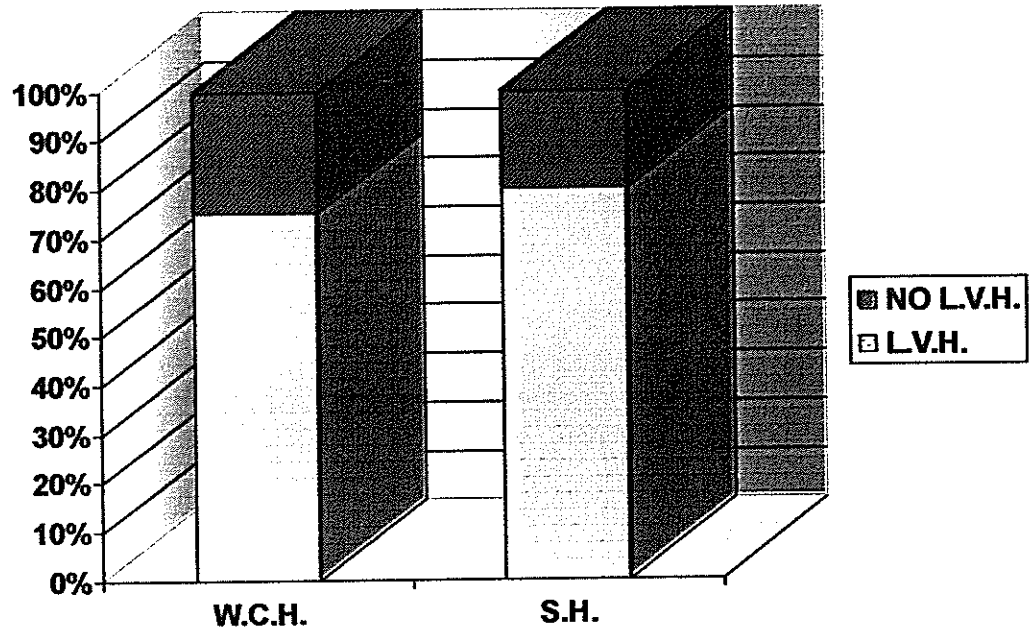
There is a statistically significant difference between both groups regarding diastolic blood pressure measurements at clinic and there is a statistically highly significant difference in measurements at home and ambulatory B.P. as shown in table (2).

Fig. (5): Heart rate at different occasions among the studied groups.



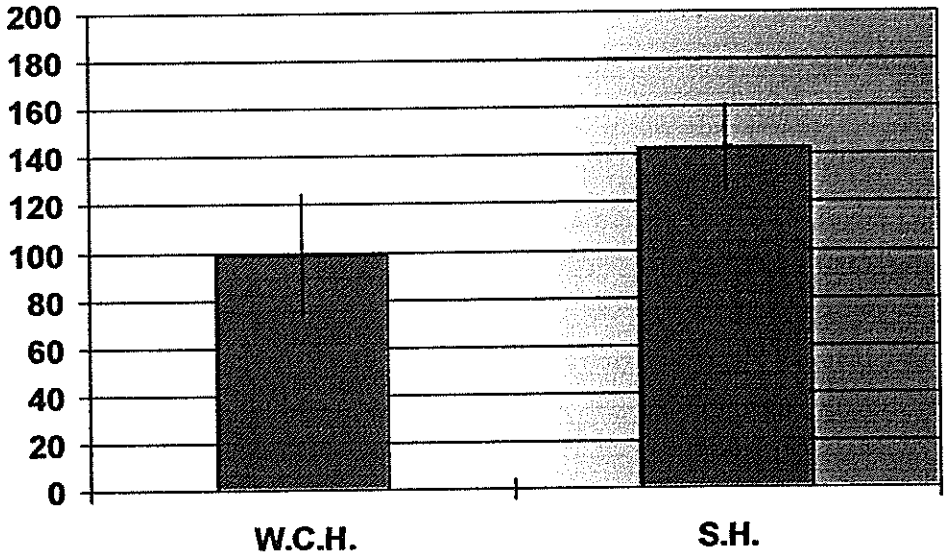
There is a statistically insignificant difference between both groups regarding clinic and nighttime heart rate , and there is a statistically significant differences between both groups regarding 24-h and daytime heart rate as shown in table (2).

Fig. (6): Comparison between the studied groups regarding the presence of L.V.H in E.C.G. .



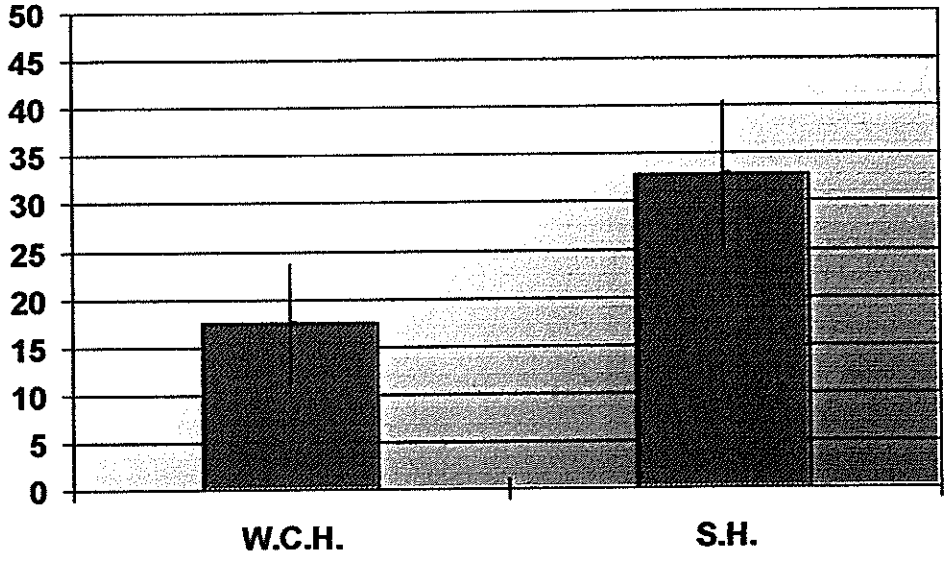
There is a statistically insignificant difference between both groups regarding the presence of . L.V.H in E.C.G. as shown in table (3).

Fig. (7): Comparison between the studied groups regarding L.V.M.I.



There is a statistically highly significant difference between both groups regarding L.V.M.I. as shown in table (4).

Fig. (8): Comparison between the studied groups regarding microalbuminuria (mg/24hr).



There is a statistically highly significant difference between both groups regarding microalbuminuria (mg/24h) as shown in table (5)

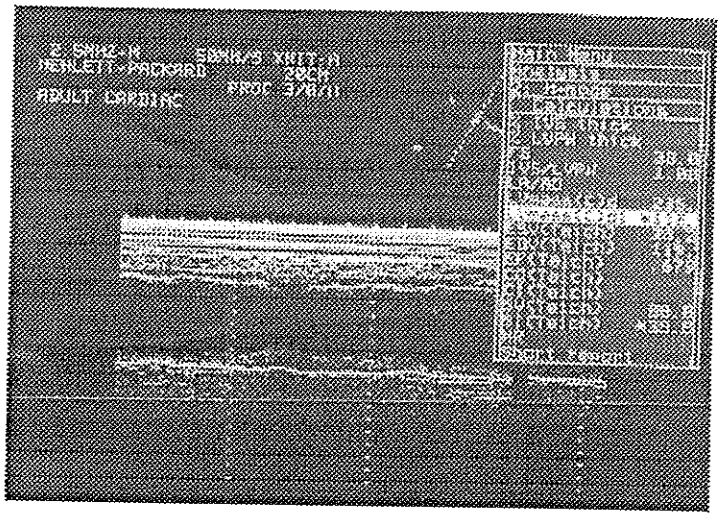


Fig. (9): Shows M-mode measurements for patient No.2 of W.C.H. group, which shows L.V.M.I. = 113 g/m^2 , with mild L.V.H.

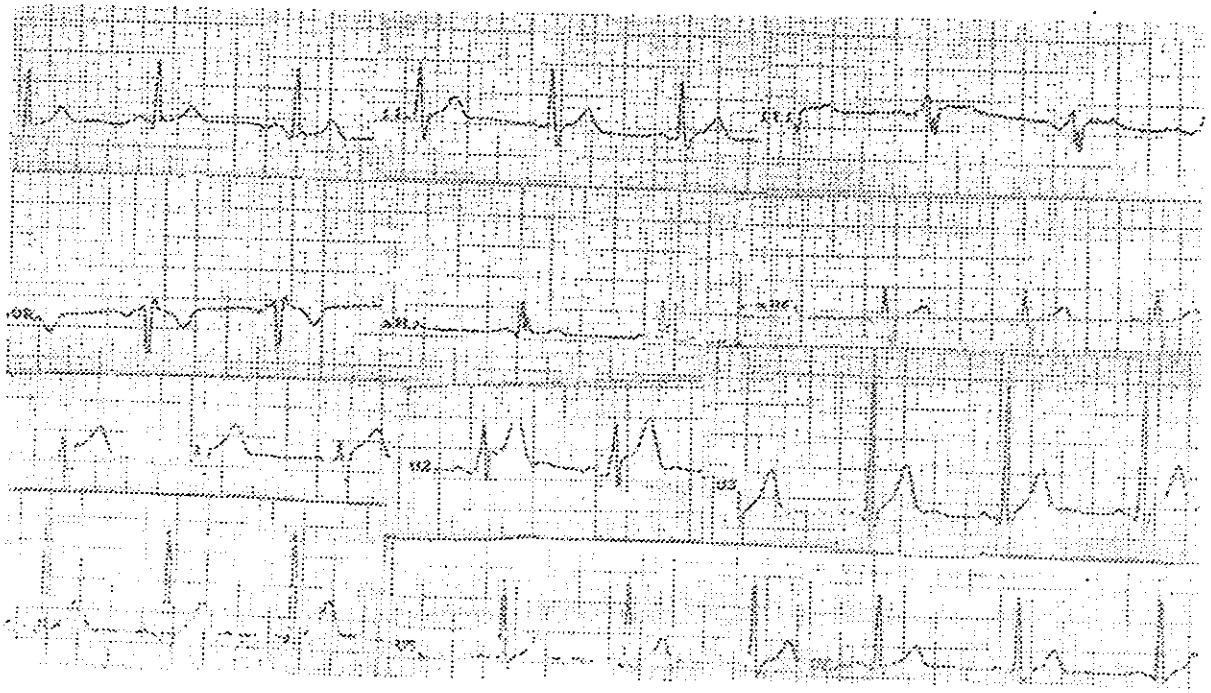


Fig.(10): Shows standard surface 12- lead resting electrocardiogram for patient No. 2 of W.C.H. group, which shows L.V.H.

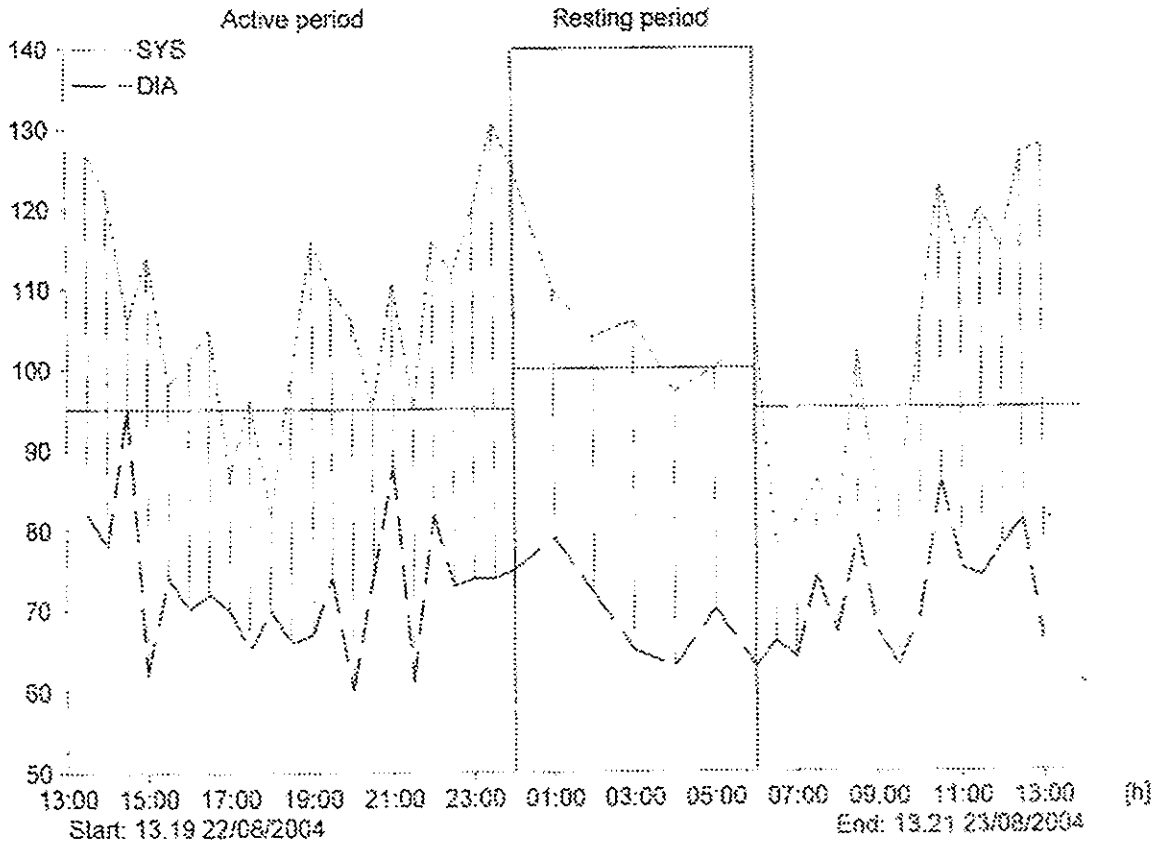
24 – h Average Ambulatory Blood Pressure Monitoring for patient No.2 of W.C.H. Group Fig (11)

Name.	ABD ELAZEM AFIFY	Physician:	SCHILLER Baar/CH
Firstname:	ABD ELAZIM	Start Time:	13:19
Number:	2	End Time:	13:21
Sex:	Male	Start Day:	22/08/2004
Age:	29	End Day	23/08/2004
Height:	170	Total Duration:	24:02
Weight:	92	File:C:\Program Files\Schiller\BR102V2.4\BR102001.XLA	

Record summary

Period	Total		Active Period 13:19-00:00		Resting Period 00:00-06:00	
	Average	Min Max	Average	Min Max	Average	Min Max
Systolic (SYS)	105	78 - 131	105	78 - 131	107	97 - 125
Diastolic (DIA)	72	60 - 95	72	60 - 95	71	63 - 79
MAP	83	70 - 99	83	70 - 99	83	74 - 92
PULSE	68	50 - 104	68	50 - 104	74	60 - 89
Charge Index	73	41 - 128	72	41 - 128	60	60 - 108
Nb of measurements	42		36		6	
SYS > Limit	4 (10%)		>165 0 (0%)		>100	4 (67%)
DIA > Limit	6 (14%)		> 95 0 (0%)		> 50	6 (100%)
Charge > Limit	1 (2%)		>120 1 (3%)		>180	0 (0%)

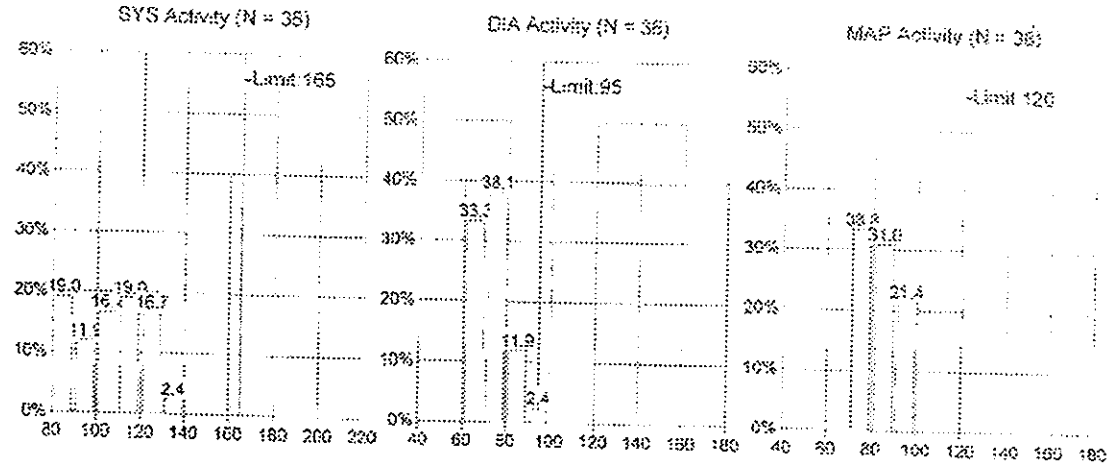
Comments:

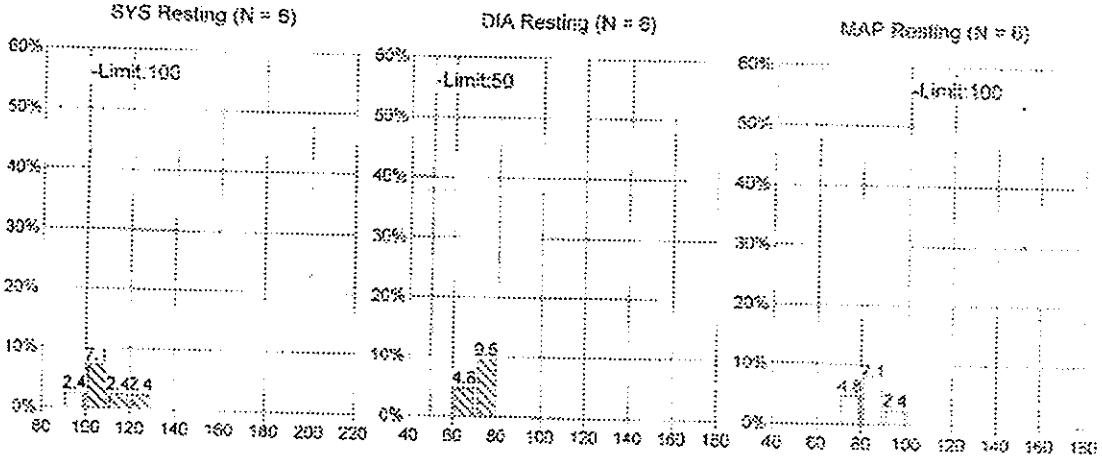


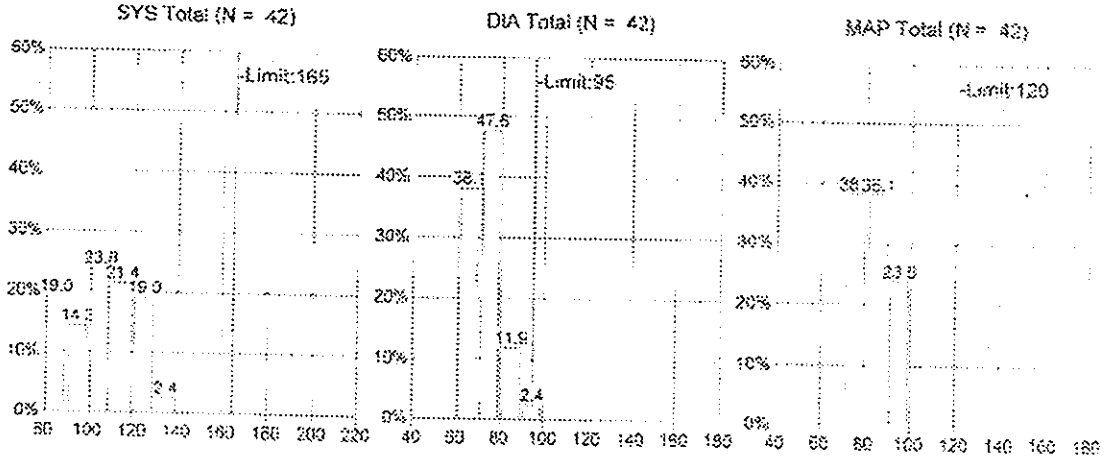
File: C:\Program Files\Schiller\BR102V2.4\BR102001.XLA
Name, firstname: ABD ELAZEM AFIFY ABD ELAZIM

Meas.	Hour	SYS	DIA	MAP	Pulse	Charge	Messages
1	13:30	127	82	97	63	80	
2	14:00	122	78	93	60	73	
3	14:30	106	95	99	79	84	
4	15:00	114	62	79	63	72	
5	15:30	98	74	82	66	65	
6	16:00	101	70	80	65	66	
7	16:30	105	72	83	67	70	
8	17:00	87	70	76	66	57	
9	17:30	98	65	75	61	58	
10	18:00	82	70	74	55	45	
11	18:30	99	66	77	59	58	
12	19:02	116	67	83	56	65	
13	***19:30***	***110***	***74***	***86***	***51***	***56***	***MOSC (K: Meas. invalid)***
14	***20:00***	***106***	***60***	***75***	***54***	***57***	***MOSC (K: Meas. invalid)***
15	20:30	85	74	81	57	54	
16	21:00	111	88	96	90	100	
17	21:30	95	61	72	76	72	
18	22:00	116	82	93	82	95	
19	22:30	112	73	86	75	84	
20	23:00	120	74	89	79	95	
21	23:30	131	74	93	85	111	
22	00:00	125	75	92	86	108	
23	01:00	110	79	89	77	85	
24	02:00	104	72	83	89	93	
25	03:00	106	65	79	66	70	
26	04:00	97	63	74	53	61	
27	05:00	100	70	80	60	60	
28	***06:00***	***105***	***63***	***77***	***62***	***65***	***MOSC (K: Meas. invalid)***
29	06:30	78	66	70	55	44	
30	07:00	81	64	70	51	41	
31	07:30	86	74	78	50	43	
32	08:00	81	67	72	54	44	
33	08:30	102	79	87	50	51	
34	09:00	82	67	72	64	52	
35	09:30	84	63	70	68	57	
36	10:00	105	69	81	68	71	
37	10:30	123	86	96	104	128	
38	11:00	114	75	88	72	82	
39	11:30	120	74	89	78	94	
40	12:00	115	78	90	80	92	
41	12:30	127	81	96	87	110	
42	13:00	128	66	87	77	99	

File: C:\Program Files\Schiller\BR102V2.4\BR102001.XLA
Name, firstname, ABD ELAZEM AFIFY ABD ELAZIM

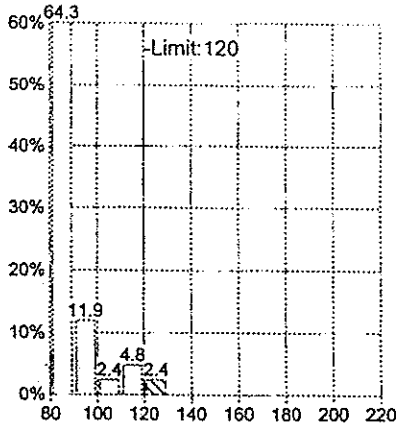




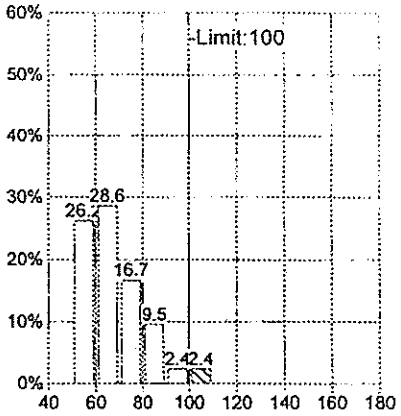


File: C:\Program Files\Schiller\BR102V2.4\BR102001.XLA
Name, firstname: ABD ELAZEM AFIFY ABD ELAZIM

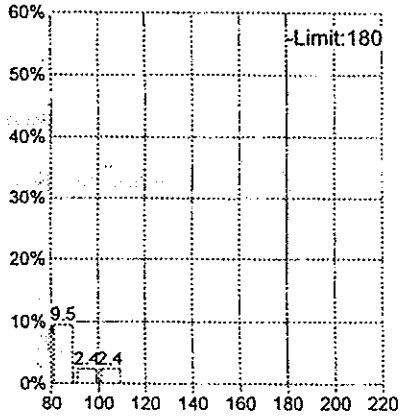
CHARGE Activity (N = 36)



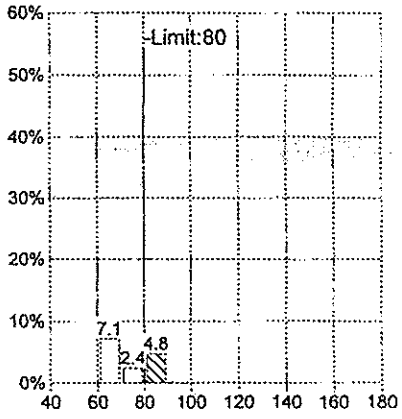
PULSE Activity (N = 36)



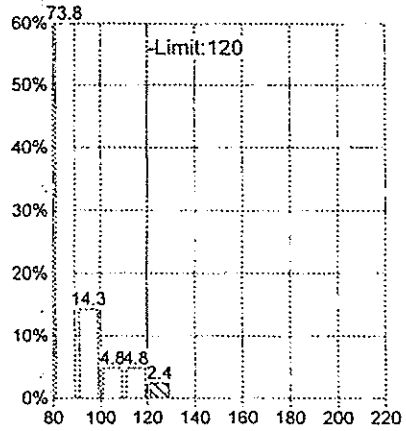
CHARGE Resting (N = 6)



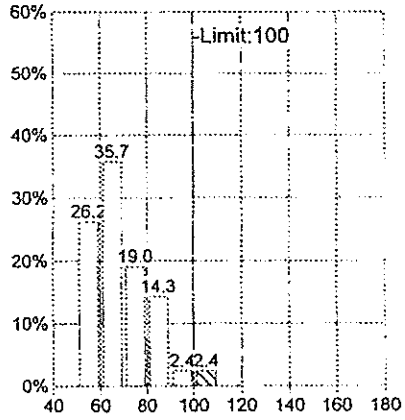
PULSE Resting (N = 6)



CHARGE Total (N = 42)



PULSE Total (N = 42)



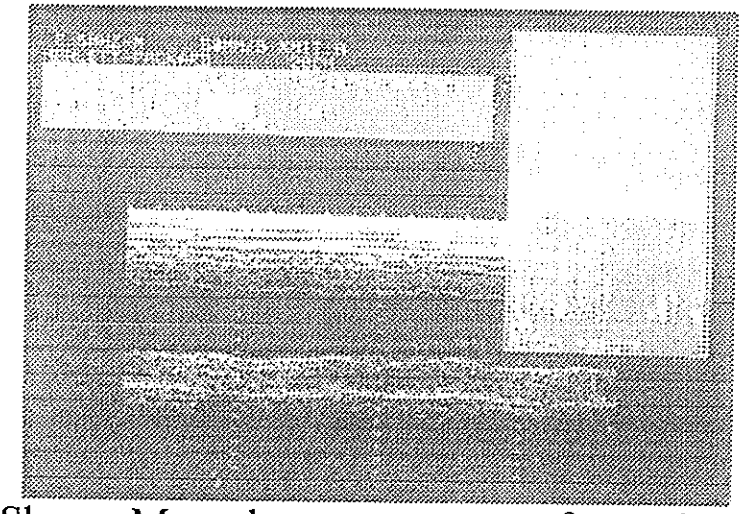


Fig. (12) : Shows M-mode measurements for patient No.1 of S.H group, which shows L.V.M.I. = 163 g/m2 , and shows concentric L.V.H.

Fig. (13) :Shows standard surface 12- lead resting electrocardiogram for patient No. 1 of S.H. group, which shows L.V.H.

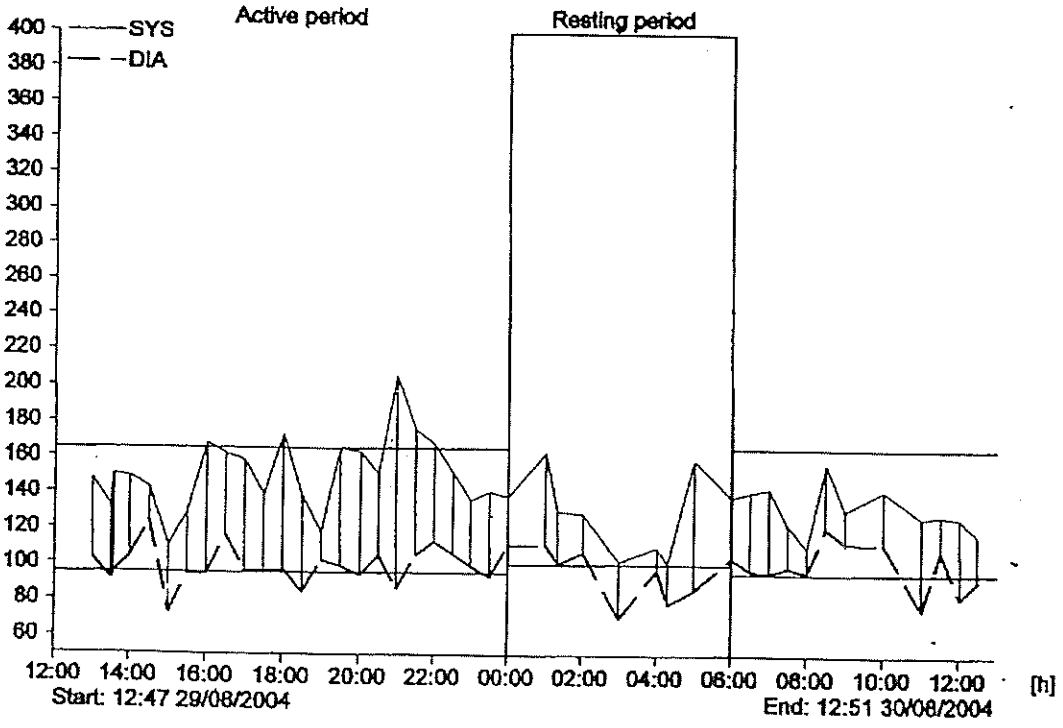
24 – h Average Ambulatory Blood Pressure Monitoring for patient No.1 of S.H. Group Fig. (14)

Name:	ABO HAMED MOHMED	Physician:	SCHILLER Baar/CH
Firstname:	ABO HAMED	Start Time:	12:47
Number:	1	End Time:	12:51
Sex:	Male	Start Day:	29/08/2004
Age:	57	End Day:	30/08/2004
Height:	170	Total Duration:	24:04
Weight:	95	File:C:\Program Files\Schiller\BR102V2.4\BR102001.XLA	

Record summary

Period	Total			Active Period 12:47-00:00			Resting Period 00:00-06:00		
	Average	Min	Max	Average	Min	Max	Average	Min	Max
Systolic (SYS)	142	101	206	145	110	206	129	101	163
Diastolic (DIA)	98	70	124	99	72	124	95	70	111
MAP	113	81	133	114	85	133	106	81	128
PULSE	91	55	247	91	55	247	90	62	179
Charge Index	131	68	390	133	68	390	121	68	285
Nb of measurements	43			35			8		
SYS > Limit	13 (30%)			>165	5 (14%)		>100	8 (100%)	
DIA > Limit	31 (72%)			> 95	23 (66%)		> 50	8 (100%)	
Charge > Limit	19 (44%)			>120	18 (51%)		>180	1 (12%)	

Comments:

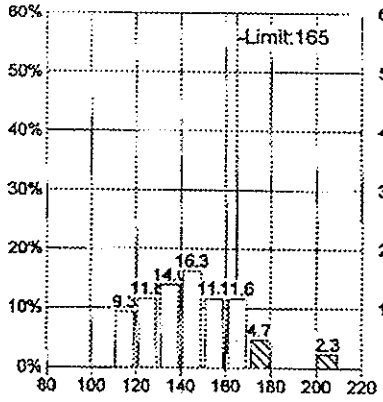


File: C:\Program Files\Schiller\BR102V2.4\BR102001.XLA
Name, firstname: ABO HAMED MOHMED ABO HAMED

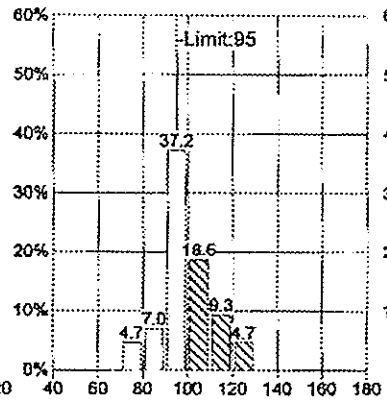
Meas.	Hour	SYS	DIA	MAP	Pulse	Charge	Messages
1	13:00	148	103	118	81	120	
2	13:30	132	91	105	99	131	
3	13:34	150	95	113	78	117	
4	14:00	149	104	119	91	136	
5	14:30	143	124	130	98	140	
6	15:00	110	72	85	84	92	
7	15:30	129	94	106	66	85	
8	16:00	168	94	119	105	176	
9	16:30	162	116	131	112	181	
10	17:00	158	96	117	247	390	
11	17:30	139	96	110	103	143	
12	18:00	173	97	122	94	163	
13	18:30	139	84	102	99	138	
14	19:00	118	102	107	97	114	
15	19:30	165	99	121	106	175	
16	20:02	163	94	117	108	176	
17	20:30	151	105	120	101	153	
18	21:00	206	86	126	92	190	
19	21:30	176	105	129	100	176	
20	22:00	168	113	131	97	163	
21	22:30	152	106	121	87	132	
22	23:00	136	99	111	84	114	
23	23:30	141	93	109	89	125	
24	00:00	138	111	120	82	113	
25	01:01	163	111	128	87	142	
26	01:21	130	101	111	80	104	
27	02:02	129	107	114	81	104	
28	03:00	102	70	81	71	72	
29	04:00	110	97	101	62	68	
30	04:18	101	78	86	82	83	
31	05:00	159	86	110	179	285	
32	06:00	138	104	115	64	88	
33	06:30	141	97	112	59	83	
34	***07:00***	***143***	***96***	***112***	***57***	***82***	***MOSC (K: Weak signal)***
35	07:30	123	99	107	55	68	
36	08:00	110	96	101	89	98	
37	08:30	157	121	133	86	135	
38	09:00	131	113	119	75	98	
39	***10:00***	***142***	***112***	***122***	***71***	***101***	***MOSC (K: Meas. invalid)***
40	11:00	127	75	92	72	91	
41	11:30	128	108	115	85	109	
42	12:01	127	82	97	78	99	
43	12:30	117	92	100	77	90	

File: C:\Program Files\Schiller\BR102V2.4\BR102001.XLA
Name, firstname: ABO HAMED MOHMED ABO HAMED

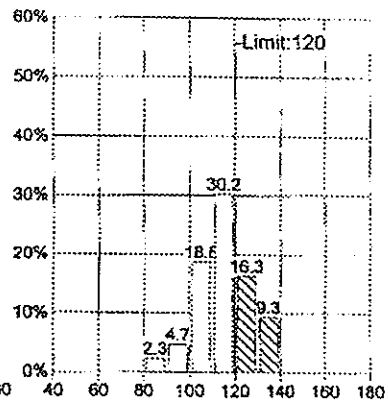
SYS Activity (N = 35)



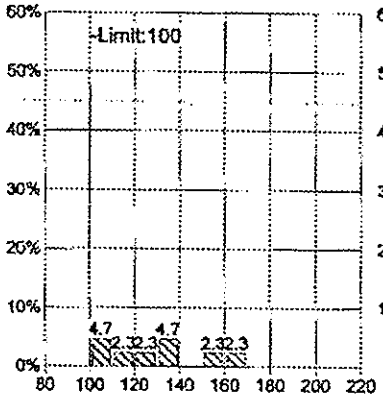
DIA Activity (N = 35)



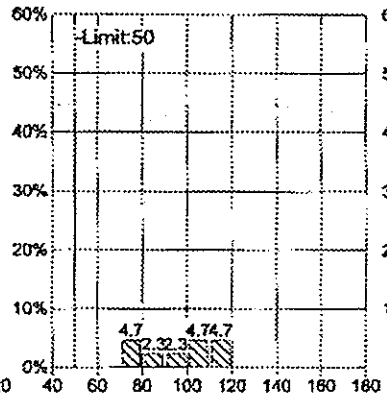
MAP Activity (N = 35)



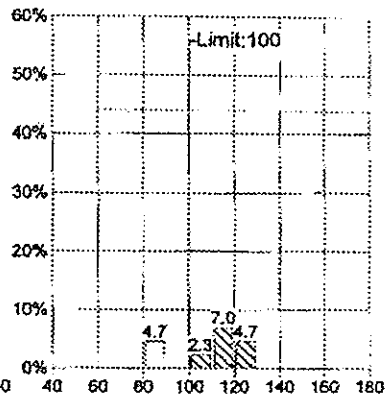
SYS Resting (N = 8)



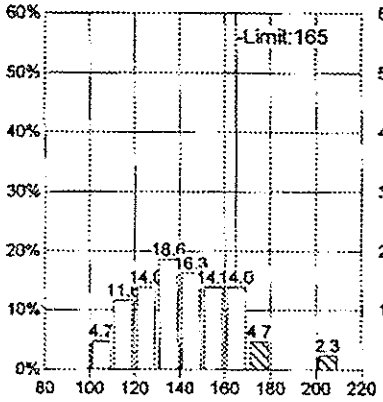
DIA Resting (N = 8)



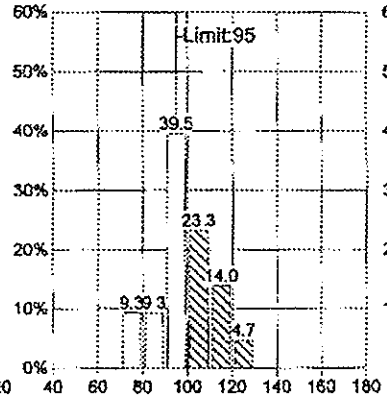
MAP Resting (N = 8)



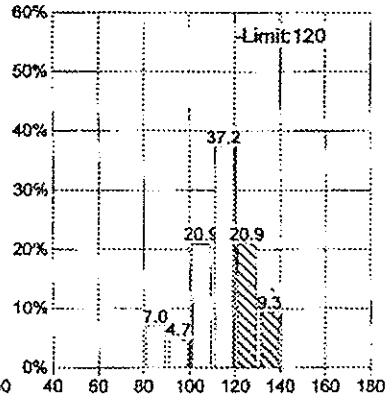
SYS Total (N = 43)



DIA Total (N = 43)

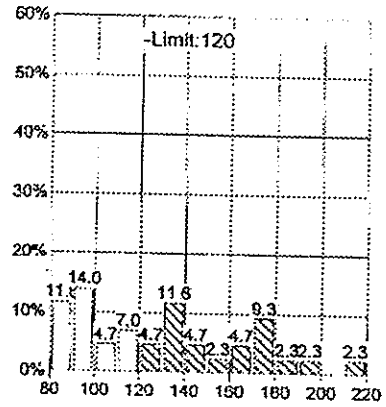


MAP Total (N = 43)

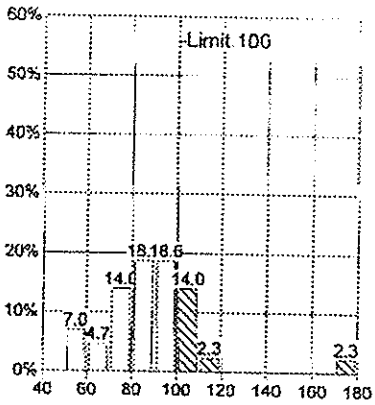


File: C:\Program Files\Schiller\BR102V2.4\BR102001.XLA
Name, firstname: ABO HAMED MOHMED ABO HAMED

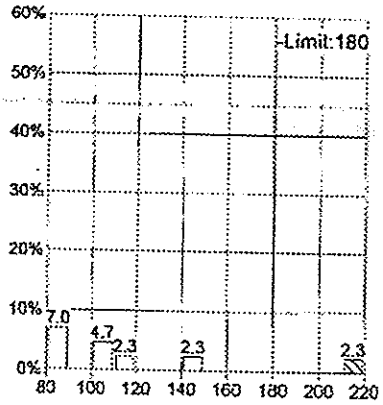
CHARGE Activity (N = 35)



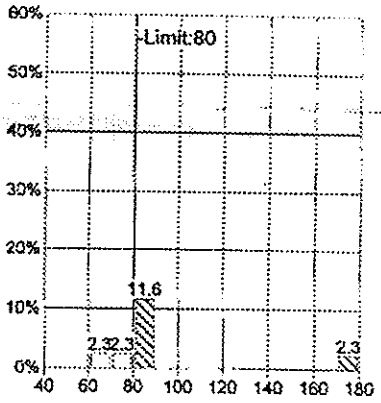
PULSE Activity (N = 35)



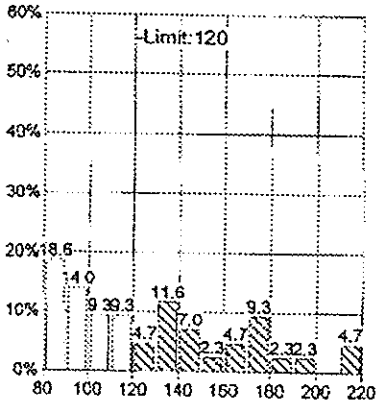
CHARGE Resting (N = 8)



PULSE Resting (N = 8)



CHARGE Total (N = 43)



PULSE Total (N = 43)