

RESULTS

The clinical parameters in both groups of the patients include :

The age :

As regard the age distribution there is a high percentage of the group of pregnancy induced hypertension (40%) aged 20-25 years and a lower percentage (15%) aged 35 years or more. A similar age distribution was observed among the groups of normal pregnancy.

Also the mean of age among the groups of pregnancy induced hypertension (P.I.H.) was slightly higher than that of normal pregnancy (27.5 ± 4.9 and 27.1 ± 5.1) respectively with statistically insignificant differences ($P > 0.05$) as shown in table (1).

Parity :

As regard the parity, 65% of the group with pregnancy induced hypertension were less than 2nd para while 50% of the other group (normal pregnancy) were 2nd para or more. However, the difference is statistically insignificant: ($P > 0.05$).

Duration of pregnancy :

Also from table (1) we can observe that the mean duration of pregnancy among the groups of P.I.H. was slightly lower than that of

normal pregnancy (37.2 ± 2.6 and 38.2 ± 1.7 , respectively) with statistically insignificant difference ($P > 0.05$).

Blood pressure :

The mean systolic blood pressure was higher among the groups of pregnancy induced hypertension than that of normal pregnancy (175.5 ± 18.5 and 120.2 ± 7.7 , respectively) with statistically significant difference ($P < 0.01$) as shown in table (1). Also from the same table we can observe that the mean diastolic blood pressure was significantly higher among the groups of P.I.H. than that of normal pregnancy (114.0 ± 9.9 and 78.0 ± 3.8 , respectively) - ($P < 0.01$).

Proteinuria :

All cases of groups of pregnancy induced hypertension have a proteinuria (whatever the degree) on the other hand there was no proteinuria among the groups of normal pregnancy as shown in Fig. (1).

Oedema of both lower limbs :

From Fig. (2), it is clearly evident that all cases of the groups of pregnancy induced hypertension have oedema of both lower limbs while the majority (80%) of the groups of normal pregnancy did not have oedema of lower limbs.

Maternal plasma renin activity :

The mean of maternal plasma renin activity among the groups of pregnancy induced hypertension (P.I.H.) was lower than that of normal pregnancy (1.56 ± 1.19 and 10.01 ± 7.00 , respectively) with statistically significant difference between both groups ($P < 0.01$) as shown in table (2) and Fig. (3).

There is a positive significant relationship between maternal plasma renin activity and foetal plasma renin activity as well as gravidity of the mother as shown in table (4). We can observe another significant negative relationship between maternal plasma renin activity and systolic blood pressure diastolic blood pressure, oedema of lower limbs and proteinuria of the mothers.

The mean of foetal plasma renin activity among the groups of P.I.H. also was lower than that of normal pregnancy (9.04 ± 7.88 and 12.50 ± 8.97 , respectively) but it was statistically insignificant ($P > 0.05$) as shown in table (3) and Fig. (4).

There is also a weak negative association between foetal PRA and the following parameters: gravidity, systolic blood pressure and diastolic blood pressure as shown in table (5).

There is also a positive and significant association or relationship between maternal plasma renin activity and foetal plasma renin activity

as shown in Fig. (7). Also there is a negative and significant relationship between maternal plasma renin activity and systolic blood pressure as shown in Fig. (5). Also there is a negative and significant relationship between maternal plasma renin activity and diastolic blood pressure as shown in Fig. (6).

Table (1) : Means and standard deviation of age, duration of pregnancy, systolic blood pressure and diastolic blood pressure.

Parameters	Studies groups	pregnancy induced hypertension X $\pm$ S.D. (Range)	Normal pregnancy X $\pm$ S.D. (Range)	t	P
Age (years)		27.5 $\pm$ 4.9 (21 - 37)	27.1 $\pm$ 5.1 (20 - 38)	0.221	> 0.05
Duration of pregnancy (weeks)		37.2 $\pm$ 2.6 (32.0 - 40.0)	38.2 $\pm$ 1.7 (36.0 - 40.0)	1.601	> 0.05
Systolic blood pressure		175.5 $\pm$ 18.5 (150 - 210)	120.2 $\pm$ 7.7 (100 - 130)	12.339	< 0.01
Diastolic blood pressure		114.0 $\pm$ 9.9 (100 - 130)	78.0 $\pm$ 3.8 (70 - 80)	15.135	< 0.01

Table (2) : Mean, standard deviation and range of maternal plasma renin activity among the studied groups.

	Maternal (PRA) ng. / ml / h (n. = 20)	pregnancy induced hypertension (n. = 20)	Normal pregnancy (n = 20)
X		1.56	10.01
± S.D.		± 1.19	± 7.00
Range		0.29 - 4.97	0.81 - 23.06
t			5.322
P			< 0.01

Table (3) : Mean, standard deviation and range of foetal plasma renin activity among the studied groups.

	Studied groups pregnancy induced hypertension (n. = 20)	Normal pregnancy (n = 20)
Foetal (PRA) ng. / ml / h		
X	9.04	12.50
± S.D.	± 7.88	8.97
Range	0.82 - 28.34	1.50 - 39.21
t		1.293
P		< 0.05

Table (4) : Correlation between maternal plasma renin activity (PRA) and other variables.

Maternal plasma renin activity (PRA)		
Variables	r	p
Foetal P.R.A	+ 0.473	< 0.05
Gravidity	+ 0.350	< 0.05
Systoloc bl. pr.	- 0.591	< 0.05
Diastolic bl. pr.	- 0.583	< 0.05
Oedema of L.L.	- 0.456	< 0.05
Proteinuria	- 0.614	< 0.01

Table (5) : Correlation between foetal plasma renin activity (PRA) and other variables.

Foetal plasma renin activity (PRA)		
Variable	r	p
Gravid	- 0.007	> 0.05
Systoloc bl. pr.	- 0.304	> 0.05
Diastolic bl. pr.	- 0.250	> 0.05
Oedema of L.L.	- 0.202	> 0.05
Proteinuria	- 0.259	> 0.05

FIG. (1) : PROTEINURIA AMONG THE STUDIED GROUPS.

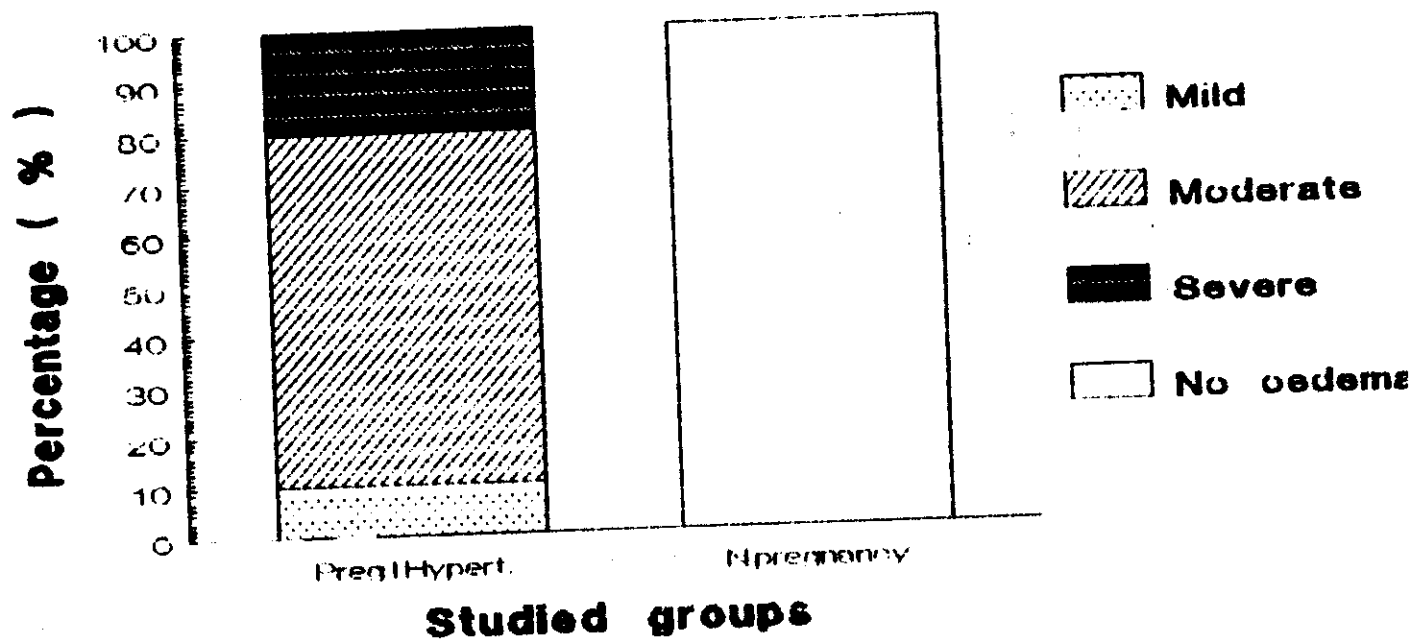
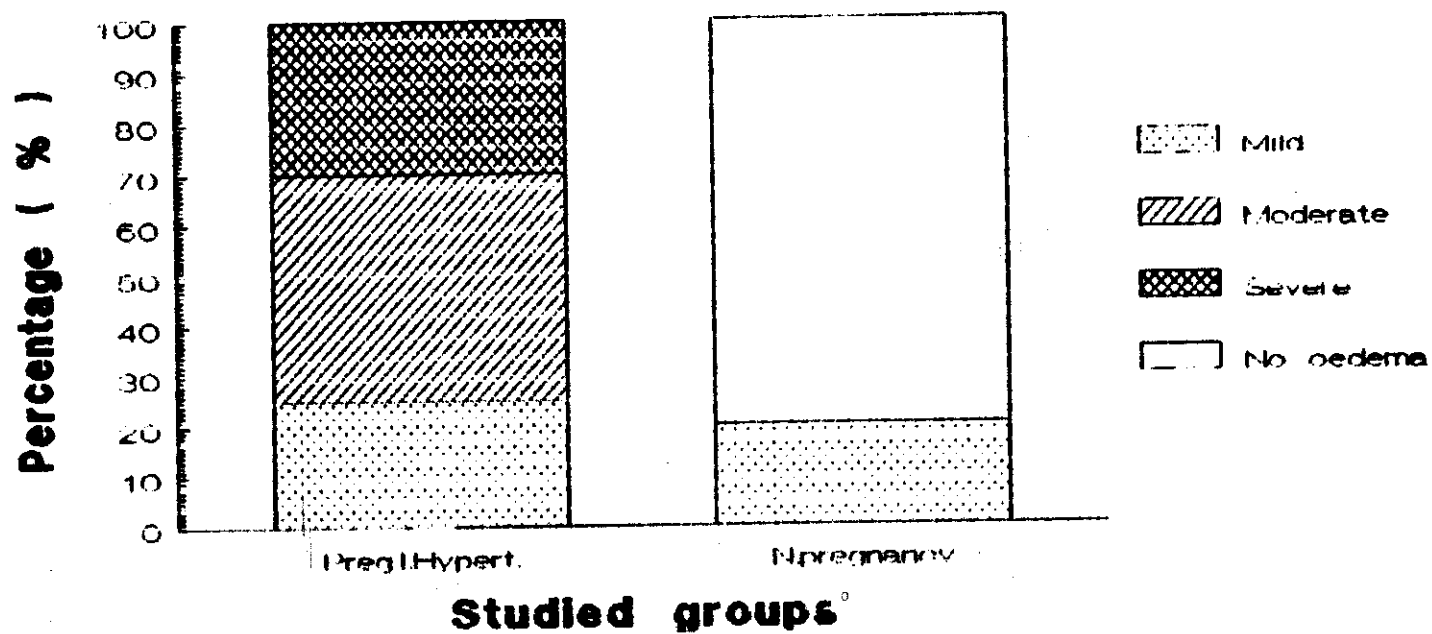


FIG. (2) : OEDEMA OF LOWER LIMBS AMONG THE STUDIED GROUPS.



**FIG. (3) : MATERNAL PLASMA RENIN ACTIVITY (ng / ml / hr.)
AMONG THE STUDIED GROUPS.**

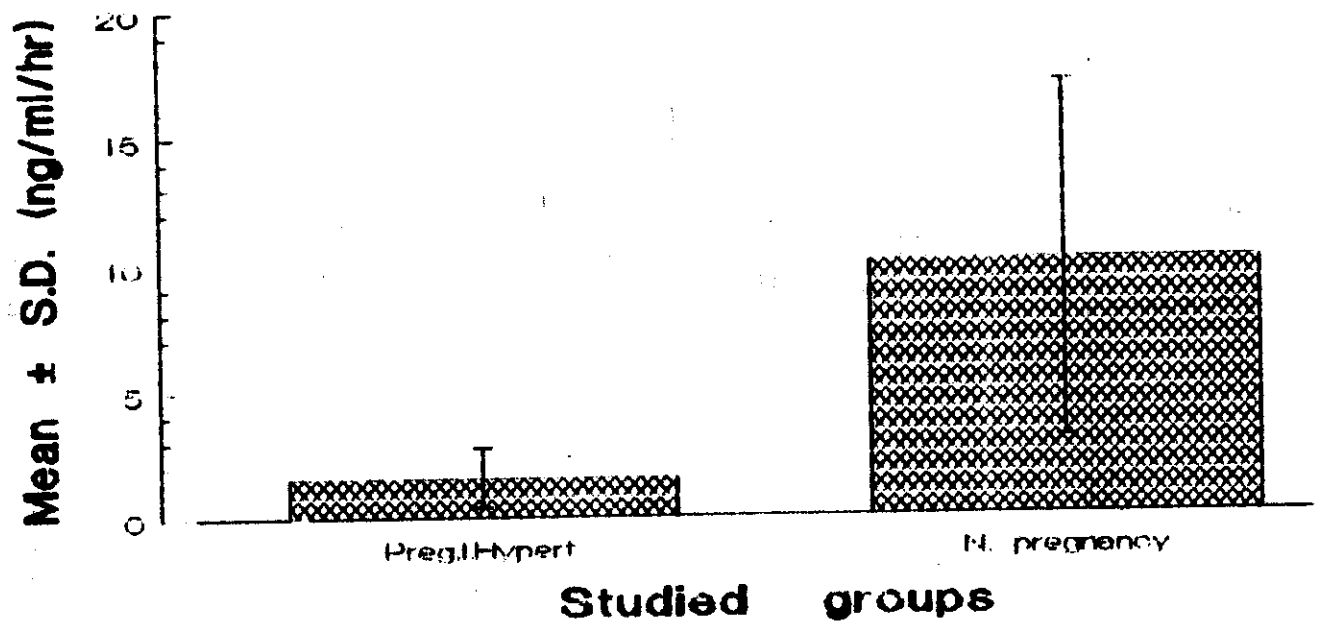


FIG. (4) : FOETAL PLASMA RENIN ACTIVITY (ng / ml / hr.) AMONG THE STUDIED GROUPS.

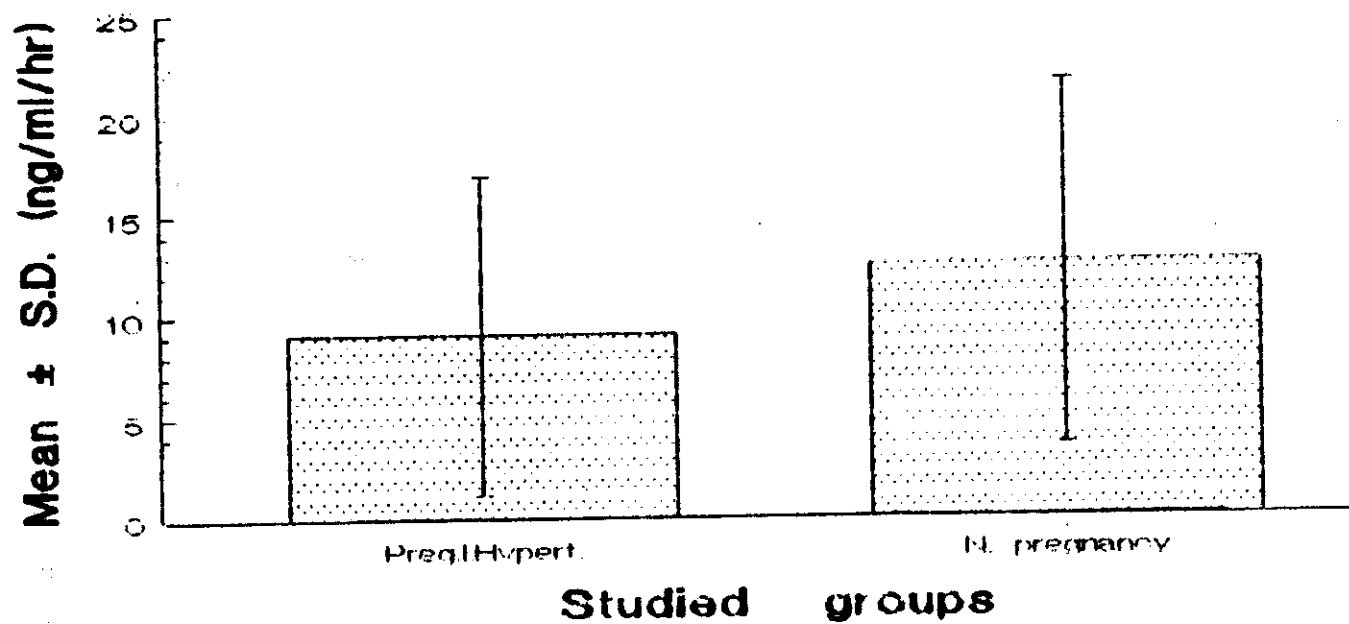


FIG. (5) : RELATIONSHIP BETWEEN SYSTOLIC BLOOD PRESSURE AND MATERNAL PLASMA RENIN ACTIVITY.

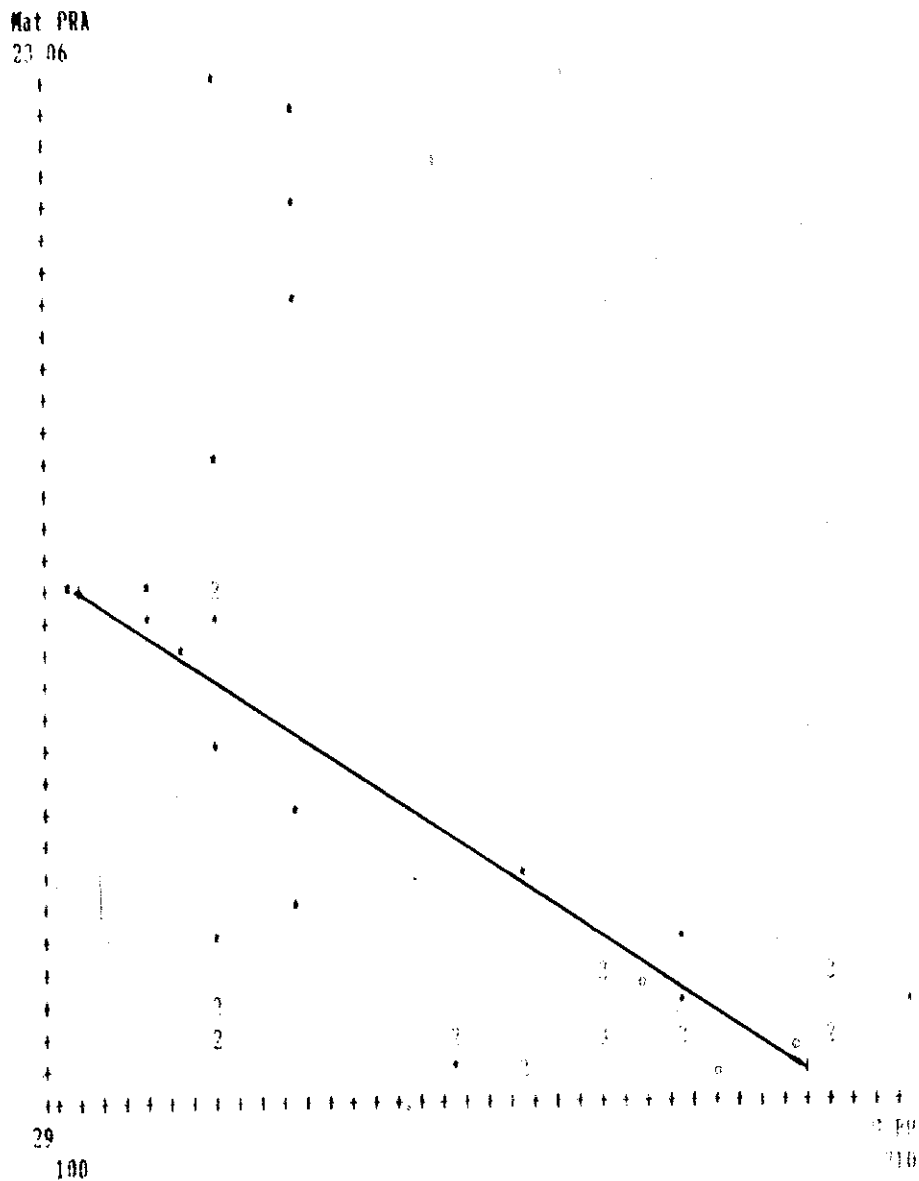


FIG. (6) : RELATIONSHIP BETWEEN DIASTOLIC BLOOD PRESSURE AND MATERNAL PLASMA RENIN ACTIVITY.

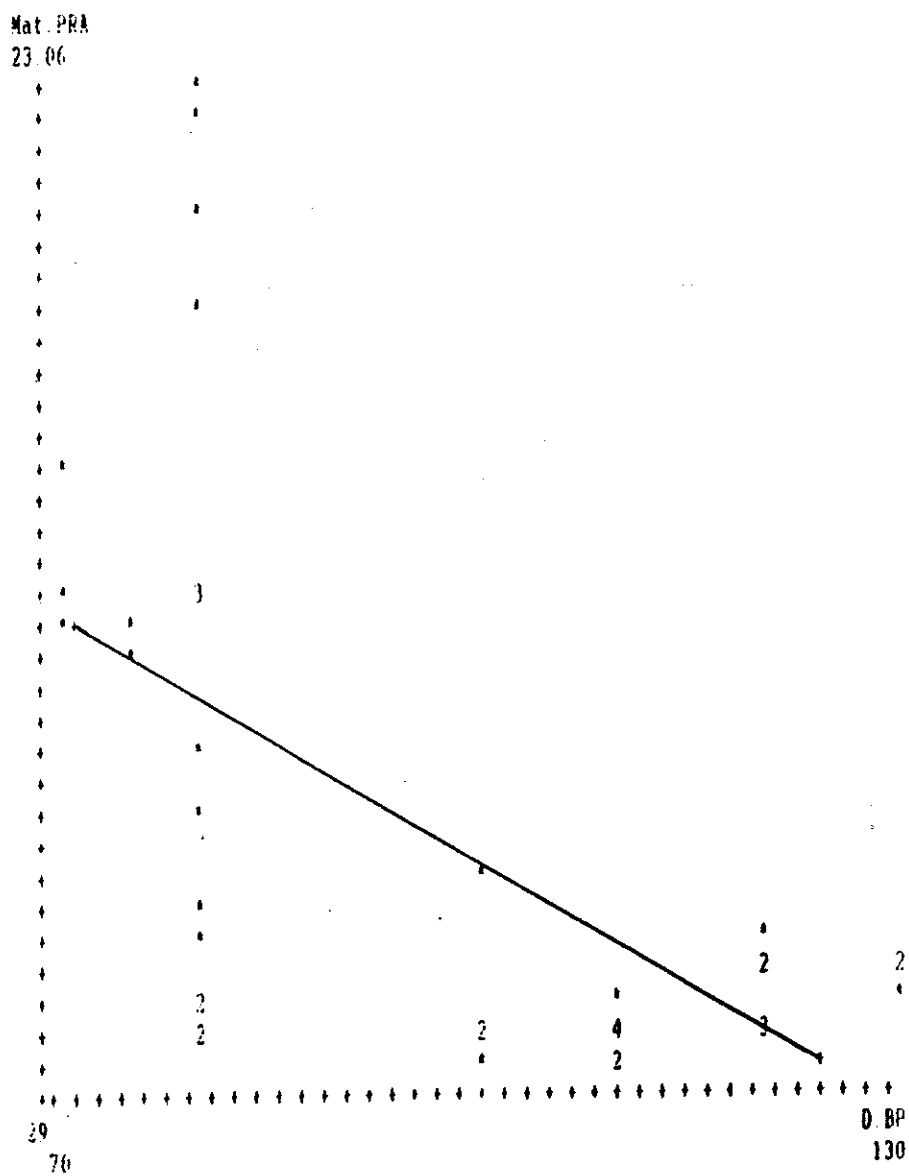
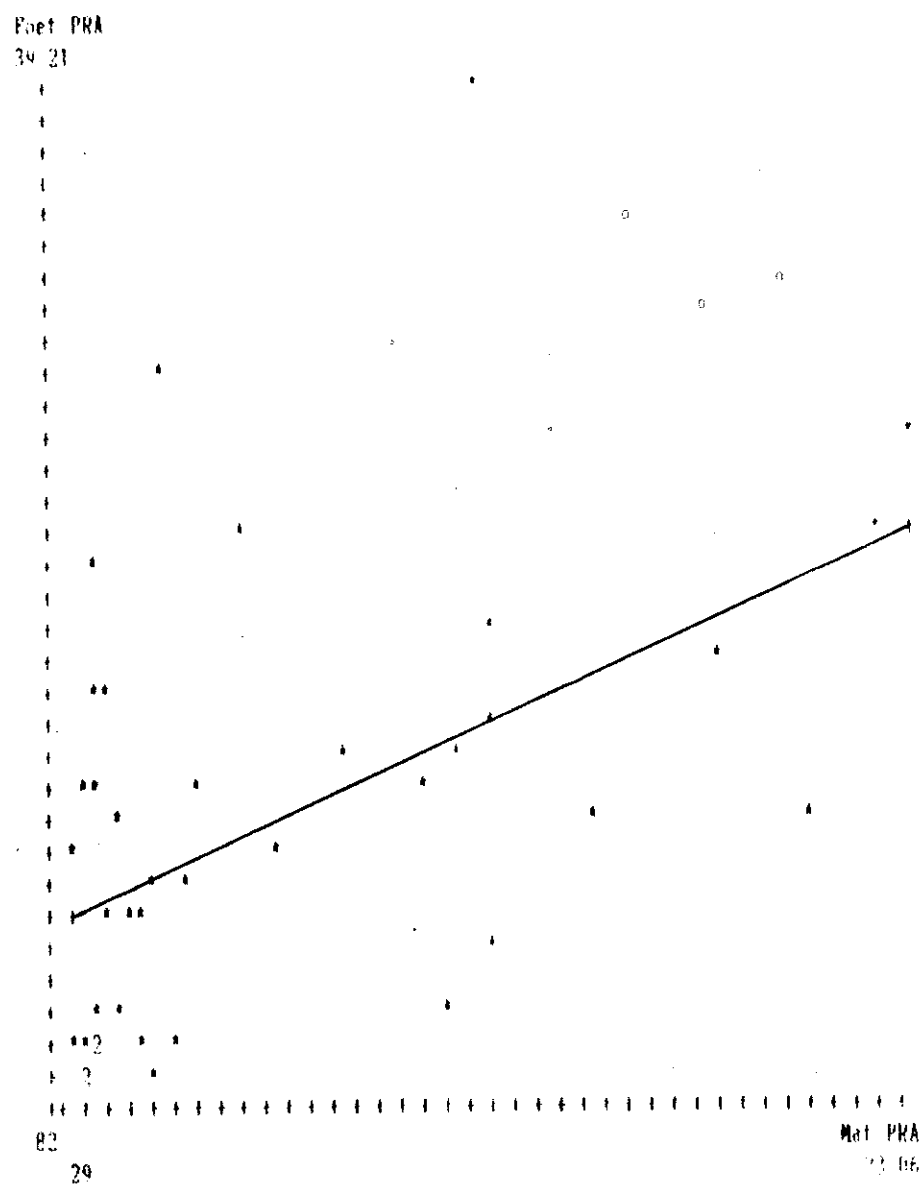


FIG. (7) : RELATIONSHIP BETWEEN MATERNAL AND FOETAL PLASMA RENIN ACTIVITY.



MASTER SHEET

Header data :

Number of cases : 40, Number of variables : 10

	Age (y)	Gravida	Parity	Preg. dur	S.B.P.	D.B.P.	I.L. Oed.	Protein	Met. PRA	Foot. PRA
1	24.0	1.0	0.0	35.0	200.0	120.0	3.00	3.00	1.20	15.80
2	30.0	5.0	4.0	36.0	210.0	130.0	3.00	2.00	1.86	7.25
3	35.0	5.0	4.0	40.0	180.0	120.0	3.00	2.00	33.3	8.79
4	22.0	1.0	0.0	40.0	160.0	100.0	1.00	2.00	21.83	21.83
5	30.0	2.0	1.0	38.0	170.0	120.0	1.00	1.00	2.83	28.34
6	33.0	3.0	2.0	38.0	150.0	110.0	3.00	1.00	1.02	15.14
7	24.0	1.0	0.0	32.0	160.0	110.0	2.00	2.00	0.39	9.21
8	25.0	3.0	2.0	32.0	200.0	130.0	3.00	2.00	2.28	2.52
9	27.0	2.0	1.0	38.0	170.0	120.0	2.00	3.00	2.40	7.75
10	22.0	1.0	0.0	38.0	180.0	110.0	1.00	3.00	0.80	12.36
11	24.0	1.0	0.0	38.0	160.0	110.0	2.00	2.00	0.55	11.81
12	31.0	2.0	1.0	36.0	150.0	100.0	2.00	2.00	1.72	1.72
13	35.0	1.0	0.0	32.0	200.0	120.0	3.00	2.00	0.29	2.32
14	27.0	6.0	5.0	40.0	170.0	120.0	2.00	2.00	0.73	2.35
15	21.0	1.0	0.0	38.0	150.0	100.0	2.00	2.00	0.96	2.08
16	22.0	1.0	0.0	37.0	180.0	100.0	1.00	2.00	0.82	1.38
17	28.0	2.0	1.0	37.0	180.0	100.0	2.00	2.00	0.89	0.82
18	29.0	4.0	2.0	39.0	200.0	130.0	0.00	3.00	2.32	0.83
19	22.0	1.0	0.0	38.0	180.0	110.0	2.00	2.00	2.11	7.53
20	28.0	3.0	2.0	37.0	170.0	110.0	1.00	2.00	0.94	3.25
21	29.0	3.0	1.0	39.0	120.0	80.0	1.00	0.00	7.53	13.29
22	21.0	1.0	0.0	40.0	120.0	70.0	0.00	0.00	14.49	10.54
23	32.0	4.0	3.0	39.0	130.0	80.0	1.00	0.00	17.91	17.44
24	23.0	1.0	0.0	38.0	120.0	80.0	0.00	0.00	11.25	39.21
25	38.0	10.0	9.0	36.0	120.0	80.0	0.00	0.00	23.08	25.73
26	33.0	4.0	3.0	38.0	130.0	80.0	0.00	0.00	11.56	18.17
27	28.0	4.0	3.0	38.0	100.0	70.0	0.00	0.00	22.25	21.76
28	21.0	1.0	0.0	37.0	110.0	80.0	0.00	0.00	11.63	13.84
29	25.0	2.0	1.0	40.0	120.0	70.0	0.00	0.00	6.24	6.24
30	22.0	1.0	0.0	40.0	120.0	70.0	0.00	0.00	10.48	3.76
31	31.0	6.0	5.0	40.0	120.0	80.0	0.00	0.00	7.1	7.1
32	32.0	7.0	3.0	34.0	130.0	80.0	1.00	0.00	20.21	10.74
33	24.0	2.0	1.0	37.0	120.0	80.0	0.00	0.00	1.49	10.95
34	22.0	1.0	0.0	38.0	110.0	75.0	0.00	0.00	10.82	12.89
35	26.0	3.0	2.0	37.0	115.0	80.0	0.00	0.00	9.75	11.48
36	29.0	1.0	0.0	40.0	120.0	80.0	0.00	0.00	2.98	1.83
37	25.0	3.0	2.0	38.0	120.0	80.0	0.00	0.00	1.62	2.99
38	34.0	7.0	4.0	40.0	120.0	80.0	0.00	0.00	0.51	1.50
39	27.0	5.0	4.0	35.0	130.0	80.0	0.00	0.00	5.88	9.34
40	20.0	1.0	0.0	38.0	130.0	80.0	0.00	0.00	3.79	11.94