RESULTS

The current study was conducted at Nasr City Health Insurance Hospital during the period between April 2010 and January 2011. A total of 75 pregnant women were included in the study. They were of 3 groups:

- Group I (n=25): including women with mild PE.
- Group II (n=25): including women with sever PE.
- Group III (n=25): including normotensive women as a control group.

Table-3 Difference between Study Groups regarding Demographic Data

	Group I (Mild PE Group) [n=25]	**Group II (Severe PE Group) [n=25]**	**Group III (Control Group) [n=25]**	***P***
Age (Years)				
Range:	22 – 36	22 – 35	22 – 35	0.871*
Mean ± SD:	28.68 ± 4.81	28.52 ± 4.65	29.16 ± 3.93	NS
Parity				
Range:	0 – 3	0 – 3	0 – 3	0.658*
Mean ± SD:	1.48 ± 1.16	1.32 ± 1.28	1.64 ± 1.25	NS
Gestational Age (Weeks)				
Range:	28 – 37+5d	28 – 37+3d	28.57 – 37+5d	0.122*
Mean ± SD:	32.38 ± 3.31	33.53 ± 2.97	34.14 ± 2.82	NS

SD standard deviation
* Analysis using one-way ANOVA test
NS non-significant
d days

Table-3 shows there were no significant differences between women of the three groups regarding age, parity and gestational age at recruitment.

Table-4 Blood Pressure measured in Study Groups

	Group I (Mild PE Group) [n=25]	Group II (Severe PE Group) [n=25]	Group III (Control Group) [n=25]
Systolic Blood Pressure (mm Hg)			
Range:	140 – 159	160 – 200	100 – 139
Mean ± SD:	144.4 ± 5.07	182 ± 12.25	116.8 ± 10.69
Diastolic Blood Pressure (mm Hg)			
Range:	90 – 109	90 – 120	60 – 89
Mean ± SD:	95.2 ± 5.1	106.4 ± 8.6	72 ± 8.16
Mean Arterial Blood Pressure (mm Hg)			
Range:	106.67 – 116.67	113.33 – 146.67	73.33 – 96.67
Mean ± SD:	111.6 ± 3.86	131.6 ± 7.01	86.93 ± 6.73

SD standard deviation

Table-4 shows descriptives of the systolic, diastolic and mean arterial blood pressure measured in the study groups.

Table-5 Albuminuria by Dipsticks measured in Study Groups

	Group I (Mild PE Group) [n=25]	Group II (Severe PE Group) [n=25]	Group III (Control Group) [n=25]
Albuminuria by Dipsticks [No. (%)]			
Nil:	0 (0%)	0 (0%)	25 (100%)
1+:	25 (100%)	0 (0%)	0 (0%)
2+:	0 (0%)	12 (48%)	0 (0%)
3+:	0 (0%)	13 (52%)	0 (0%)

Table-5 shows that all of the included 25 women of group I (Mild PE Group) had 1+ albuminuria by dipsticks. Of the included 25 women of group II (Severe PE Group), 12 (48%) had 2+ albuminuria, while 13 (52%) had 3+ albuminuria.

Table-6 Difference between Study Groups regarding Serum CRP Titre

	Group I (Mild PE Group) [n=25]	Group II (Severe PE Group) [n=25]	Group III (Control Group) [n=25]	*P*
Serum CRP (mg/L)				
Range:	0 – 12	12 – 48	0 – 12	<0.001*
Mean ± SD:	6 ± 4.9	25.92 ± 13.72	5.76 ± 5.04	HS
Serum CRP [No. (%)]				
Negative(<6mg/L):	8 (32%)	0 (0%)	9 (36%)	
6 mg/L:	9 (36%)	0 (0%)	8 (32%)	
12 mg/L	8 (32%)	10 (40%)	8 (32%)	
24 mg/L:	0 (0%)	5 (20%)	0 (0%)	<0.001**
> 24 mg/L:	0 (0%)	10 (40%)	0 (0%)	HS

SD standard deviation
* Analysis using one-way ANOVA test
** Analysis using Chi-Squared test
HS highly-significant

Table-6 shows that the mean serum CRP titre was significantly higher among women with severe PE group when compared to women with mild PE and control group [25.92 ± 13.72 mg/L vs. 6 ± 4.9 mg/L vs. 5.76 ± 5.04 mg/L, respectively, p<0.001]. There was no significant difference between women with mild PE and control group regarding serum CRP titre.

60% of patients with severe PE had a CRP titre ≥ 24 mg/L, in contrast to none (0%) in mild PE patients and in the control group (p<0.001).

Figure-2 Pie-Chart showing Difference between Study Groups regarding Serum CRP Titre

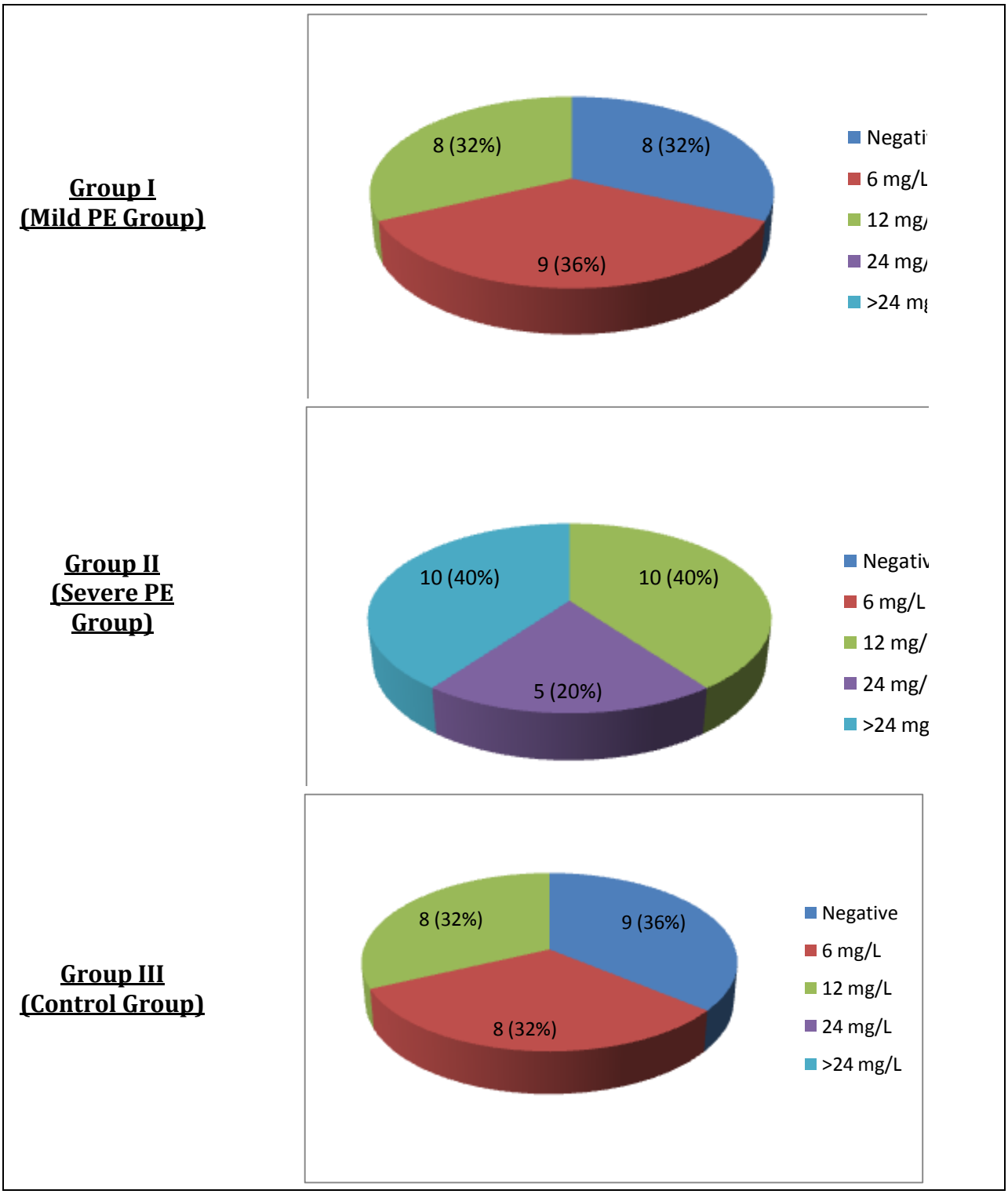


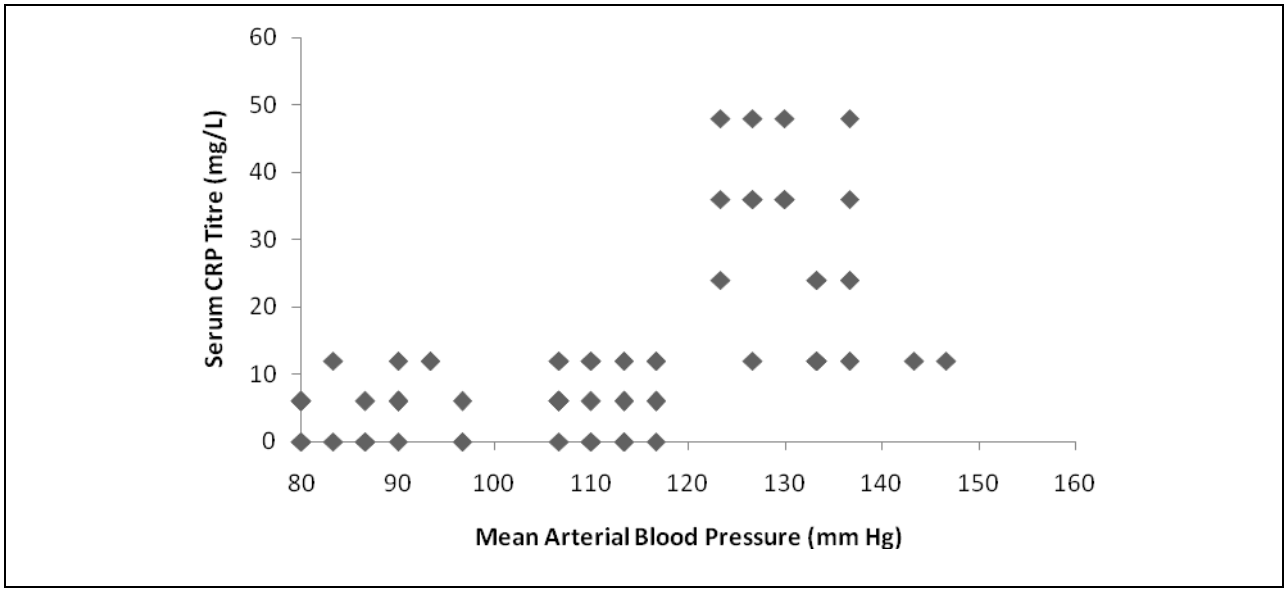
Table-7 Correlation between Serum CRP Titre and Measured Variables

		Serum CRP Titre
Systolic Blood Pressure	r_s ***P***	0.616 <0.001 HS
Diastolic Blood Pressure	r_s ***P***	0.505 <0.001 HS
Mean Arterial Blood Pressure	r_s ***P***	0.595 <0.001 HS
Albuminuria	r_s ***P***	0.653 <0.001 HS
Age	r_s ***P***	-0.119 0.308 NS
Parity	r_s ***P***	-0.083 0.480 NS
Gestational Age	r_s ***P***	0.068 0.562 NS

r_s Spearman's correlation coefficient
HS highly significant
NS non-significant

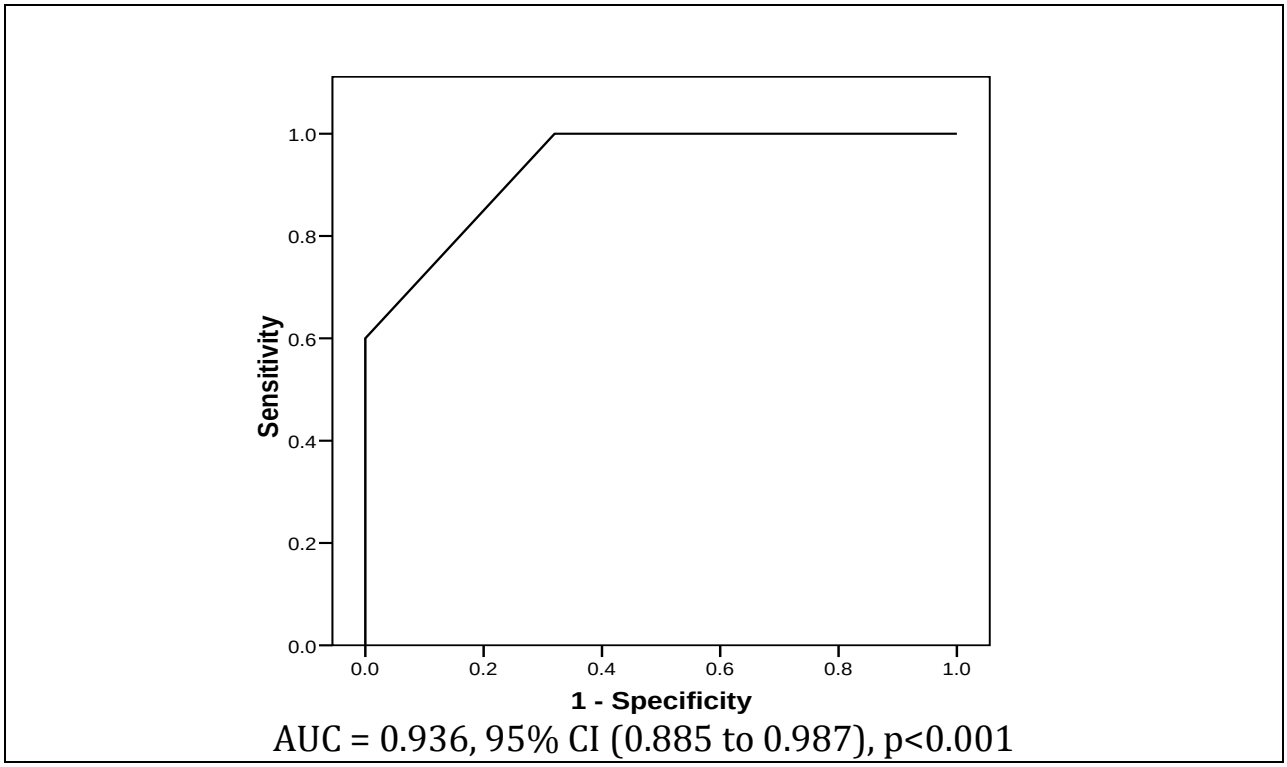
Table-7 shows that there was a significant positive correlation between serum CRP titre and each of systolic blood pressure, diastolic blood pressure, mean arterial blood pressure and albuminuria level (figure-3). There was a non-significant correlation between serum CRP titre and each of age, parity and gestational age.

Figure-3:



Scatter-Plot showing Correlation between Serum CRP Titre and Mean Arterial Blood Pressure

Figure-4 ROC Curve for Association between Serum CRP Titre and Diagnosis of Severe PE



ROC Receiver operator characteristic curve
AUC Area under the curve
CI Confidence Interval

Receiver operator characteristics (ROC) curve was constructed for estimating the association between serum CRP titre and the diagnosis of severe PE. The curve showed a significant association, denoted by the significantly high area under the curve [AUC = 0.936, 95% CI (0.885 to 0.987), p<0.001] (figure-4).

Table-8 Diagnostic Accuracy of Serum CRP in Severe PE

Serum CRP Titre in Diagnosis of Severe PE	Sensitivity	Specificity	PPV	NPV
≥ 12 mg/L	100%	70%	65.4%	100%

PPV positive predictive value
NPV negative predictive value

Table-8 shows that a serum CRP titre ≥ 12 mg/L was significantly associated with diagnosis of severe PE (sensitivity of 100%, specificity of 70%, PPV 65.4%, NPV 100%).