

## PREDICTION OF PRE-ECLAMPSIA, BY SECOND TRIMESTER MEAN ARTERIAL PRESSURE

by

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Pre-eclampsia is commonly considered to be a complication occurring after the twenty-fourth week of pregnancy. Dalton (1960) however has shown that it is an entity that occur before the twenty-fourth week. Fallis and Langford, (1963) suggested that blood pressure of 120/70 mm of mercury in second trimester should alert the possibility of ultimate development of P.E.T. in 3rd trimester. The impact of given blood pressure on circulatory dynamics is probably best expressed by using mean arterial pressure (M.A.P.) Page and Christianson (1976) suggested that when second trimester M.A.P. was 90 or more there was steady progression in incidence of P.E.T. in third trimester and perinatal mortality. The present study has been carried out to find out correlation of 2nd trimester M.A.P. and development of P.E.T. in third trimester.

### *Method and Material*

Fifty cases who were attending ante-

natal clinic of Zanana Hospital, attached to R.N.T. Medical College, Udaipur, were taken randomly and irrespective of their parity for study. These women were examined and followed personally throughout pregnancy and labour. The blood pressure was recorded by the same person at each visit in sitting position. The M.A.P. was calculated by following formula advocated by Burton MAP

$$S + 20$$

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careful watch was kept for onset of P.E.T.

### *Result and Discussion*

Study included 150 cases of age group 20 to 40 years, average age being 26 years and 40% were primigravida. Out of 150 cases 46 had M.A.P. 90 or more while 104 had M.A.P. less than 90. Thirteen out of 46 with M.A.P. more than 90 developed P.E.T. in third trimester, (Table 1). With each 5 mm rise in

TABLE I  
*Mean Arterial Pressure*

S. No.	M A P	No. of cases	%	Development of PET	
				No. of cases	%
1.	Less than 90 mm Hg	104	64.4	1	0.96
2.	More than 90 mm Hg	46	30.6	13	28.3

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second trimester MAP, there was progressive rise in onset of PET in third

trimester. From 40 patients with MAP 85 only, 1 developed PET later on i.e. 2.5% and 64 women who had MAP less than 85, none developed PET later on (Table II).

risk for development of PET in third trimester. Present study showed 28.3% women with second trimester MAP over 90 developed PET 4 to 6 weeks later while Fallis and Longford in 1963 reported

TABLE II  
Percentage of Development of PET

S. No.	M A P	No. of cases	% Who developed PET		
			Present study	Fallis (1963)	Page (1976)
1.	65- 70	4	—	—	—
2.	71- 75	30	—	—	.7
3.	76- 80	30	—	2	1.2
4.	81- 85	40	2.5	3.5	2
5.	86- 90	20	20	10	3.4
6.	91- 95	20	40	40	5.6
7.	96-100	6	33.3	30	11.6

As the aetiopathology of PET is yet not very clear, the treatment of it in respect to foetal mortality and morbidity is not very satisfactory. Diagnosis of PET after full blown clinical picture carries bad prognosis for the mother as well as baby. Purpose of good antenatal care is to find out methods by which onset of P.E.T. can be predicted much earlier, so that preventive measures in the form of rest in lateral position, check over weight gain and diuretics could be used to prevent onset of PET and perinatal mortality and mortality due to it can be reduced. Fallis and Langford, (1963) and Page and Christianson (1976) reported that second trimester MAP 90 or over signifies high

34.5% developed PET later on. According to him 82% of those developing PET had MAP of 90 or more in the second trimester. The use of MAP simplified the interpretation of blood pressure during pregnancy and MAP 90 or more is associated with an impaired utero-placental circulation, high still births and pre-eclampsia.

#### References

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