

OEDEMA IN LATE PREGNANCY—ITS SIGNIFICANCE

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SUMMARY

113 women between 34 to 40 weeks of pregnancy were studied. The incidence of oedema in late pregnancy was 3.9% of all deliveries, out of which 57.5% were associated with P.I.H., 20.3% with anaemia, and 30.1% had simple oedema. Since P.I.H. and anaemia are known causes of low birth weight babies born to such patients were not included in the study. Primigravid women below 30 years were more prone to develop oedema. Maternal nutritional status has very little relation with development of oedema as 20.5% of women belonging to higher socio-economic status had oedema. All the cases remain normotensive during the period of study. Mean birth weight of babies in the oedema group (2925 ± 390 gm) was significantly greater than control group (2771 ± 413 gms). Therefore simple oedema in late pregnancy cannot be regarded as an early sign of toxæmia and do not have deleterious effect on the foetus.

Introduction

Oedema in pregnancy is a common problem met with in day to day obstetric practice. It has been believed for a long-time that oedema in pregnancy is abnormal and that it is an early sign of impending toxæmia. However during the last decade some prospective studies have shown that oedema in pregnancy may be physiological with beneficial effect on the birth weight of the infant (Robertson, 1971) and does not necessarily indicate impending toxæmia.

A study was undertaken in the Department of Obstet. and Gynaecology of Gauhati Medical College from 1-1-1985 to 31-7-1985 on 113 women between 34 to 40

weeks of pregnancy who had oedema at the time of attending hospital. During this period there were a total of 2920 deliveries giving an incidence of 3.9% of all deliveries.

In this study an attempt was made to evaluate the effect of oedema on the outcome of pregnancy and on foetal well being as assessed by birth weight Apgar score and perinatal mortality.

Material and Methods

113 women between 34-40 weeks of pregnancy having oedema were studied. A detailed history with special reference to socio economic status, dietary habit were noted. A thorough clinical examination and routine laboratory investigations like Hb% estimation, examination of

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urine for proteinuria and also serum protein estimations were done. Since pregnancy induced hypertension (PIH) and anaemia are known causes of low birth weight babies, these were not included in the study. Results of cases with simple oedema (without hypertension and anaemia) were compared with a control group of 100 women without oedema selected at random during the same period of time. The cases in the oedema group were treated by rest and salt restricted diet and kept under close observation for any development of hypertension and albuminuria and allowed to go into spontaneous labour. None of the cases in the oedema group developed hypertension during the period of study.

Results and Observation

Out of 113 cases of oedema, 64.6% were unbooked, 35.4% were booked cases. 57.5% were associated with pre-eclamptic toxæmia, 20.3% with anaemia Hb less

than 10 gm% and 30.1% had only oedema. There were two cases of twin—both were anaemic.

Table I and II shows that primigravid women below 30 years were prone to develop oedema.

TABLE II
Distribution of Parity

	Primi %	P ₁ -P ₄ %	P ₅ & above %
Oedema group	55.8	35.2	Nil
Control group	48	47	5

Though majority of the hospital patients belongs to the low socio-economic status, 20.5% of cases belonging to high socio economic status developed oedema.

Serum protein in both the groups are within normal range.

TABLE I
Age Distribution in Oedema and Control Group

	Below 20 years	21-30 years	31-40 years	years Above 40
Oedema group	14	18	2	Nil
Control group	19	62	18	1

TABLE III
Socio-economic Status and Dietary Habit

	Socio-economic status			Dietary habit	
	Low	Middle	High	Veg.	Non-Veg.
Oedema group	15 (44.1%)	12 (35.3%)	7 (20.5%)	—	All Veg.
Control group	55	43	2	—	All Veg.

TABLE IV
Serum Protein Level in Both the Groups

	Range	Mean	S.D.	S.E.
Oedema	5.7-7	6.22	0.41	0.12
Control	6.2-7.8	7.56	0.81	0.22

TABLE V
Mode of Delivery

	Spontan- neous	Forceps	L.S.C.S.
Oedema	26	7	1
Control	88	7	5

Oedema in pregnancy does not seem to influence the outcome of labour as majority of the cases delivered vaginally. Only one case with history of 11 years infertility was delivered by Caesarean section.

TABLE VI
Effect on the Foetus

	Live birth	Still birth	Apgar Score	Birth weight in gms.
Oedema	34	—	8.65	2925 ± 390
Control	96	4	87	2771 ± 413

The mean birth weight in the oedema group was slightly higher than in the control group. All the babies were born alive in the oedema group and there were no significant differences in the apgar score in both the groups.

Discussion

Oedema is a common sign seen during pregnancy. In our series nearly 4% of all deliveries had oedema in the late pregnancy. Out of which 57.5% were associated with P.E.T., 20.3% with anaemia and 30.1% had simple oedema. Similar observations were reported in the annual

report of NIN (1979), 32.2% had simple oedema and 18.8% had P.E.T. Primigravid women below 30 years were more prone to develop oedema in late pregnancy whereas none of the patients above 40 years and grand multipara had oedema. As 20.5% of women belonging to higher socio-economic status, taking non vegetarian diet and serum protein within normal range developed oedema shows that there seems to be very little relationship between maternal nutritional status and development of oedema.

All the cases in the oedema group remain normotensive during the course of study. This shows that presence of oedema could not be always used as an indication of subsequent appearance of hypertension (Robertson, 1971).

Presence of oedema in late pregnancy does not seem to influence the mode of delivery as 76.4% delivered spontaneously. The mean birth weight of oedema group (2925 ± 390 gm) was significantly greater than the control group (2771 ± 413). Similar findings were reported by Robertson, 1971, Annual report NIN (1979). There were no differences in the Apgar Score in both the groups. None of

