

PREGNANCY OUTCOME IN SEVERE ANAEMIA

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SUMMARY

Severe anaemia was present in 4.30% cases admitted in labour. The profile of such patients was—illiterate, multiparous class IV, V, unbooked patients with 4.3% peripheral blood smear positive for malarial parasite; 12.35% stool positive for hookworm ova. The rate of LBW infants was 61.7% as against 32% in control group. The perinatal deaths were 46.85% as compared to 18% in control cases. The incidence of preterm deliveries was 41.14% as against 18% in control cases. The mean birth weight in anaemic mothers was 2.2 kg with S.D. of .6 kg. In controls, mean birth weight \pm SD was $2.6 \pm .53$. There were 4 maternal deaths in anaemic group. Mean hospital stay was 10.2 days in anaemic patients and 2.8 days in control group.

Introduction

Severe anaemia in pregnancy has become a rarity in developed countries. Very little record is available as regards its effect on pregnancy outcome in Western literature. A retrospective study of cases of severe anaemia (Hb. < 6.0 G%) in labour was carried out to study the magnitude, the aetiology and adverse effects of this problem so that the vulnerable group may be identified and MCH services intensified to prevent this complication.

Material and Methods

A five year (1981-1985) review of patients of severe anaemia admitted as emergency in labour room in Medical College Hospital, Rohtak were reviewed. For

control fifty patients with Hb > 10 G% were taken.

Observations

Out of a total of 3952 deliveries 170 (4.30%) were cases of severe anaemia. All cases of APH were excluded so that only the effect of chronic anaemia on mother and fetus could be studied.

Aetiological Factors

Out of these 170 patients only 18 (10.58%) had history of fever with rigors and chills; 22 (12.94%) gave history of chronic diarrhoea and excessive vomiting. In the rest 130 patients no contributory history was available.

On examination, liver and spleen were palpable in 40 patients and in the rest, the records did not show any hepatosplenomegaly. Congestive cardiac failure

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was present in 28 patients. All of whom had haemoglobin range of 2-3 G%.

On investigations—only 10 (4.30%) patients had peripheral blood film positive for malarial parasite and 21 (12.35%) had hook worm ova in the stools. In 158 (92.94%) the type of anaemia was dimorphic and only in 12 (7.05%) it was pure microcytic hypochromic.

Parity and Education

Out of these 170 patients 48 (28.23%) were primigravida and 122 (71.76%) were multiparous. Out of control group primis were 23 (46%) and multis 27 (54%).

Education

Out of 170 patients, 60 (35.29%) were illiterate. 88 (51.76%) had studied upto fifth class and 20 (11.76%) had reached eighth class level. Only 2 (1.17%) were matriculate. Out of control cases only 12 (24%) were illiterate, 10 (20%) were fifth class, 15 (30%) were matriculate and 13 (26%) were graduates or more.

Socio-economic Status

Most of the patients 160 (94.11%) were from socio-economic class IV and V. While only 8 (4.70%) were class III and

2 (1.17%) were class II. In control cases 10 (20%) were class IV and V, 25 (50%) were class III, 10 (20%) class II and 5 (10%) class I.

Management during Labour

All the patients received intermittent O₂ inhalation, packed cell transfusion as much as was available and frusemide intravenously. In addition, patients in congestive cardiac failure (CCF) also received digoxin. Prophylactic ergometrine was given (except to the cases in CCF).

Fetal Outcome

The distribution of babies by weight and perinatal deaths (Fresh still births FSB; Macerated stil births MSB, early neonatal deaths END) in each group is shown in Table I.

Table I, shows that the perinatal mortality in severe anaemia cases (46.35%) was significantly more than in control cases (18%).

The number of low birth weight babies (108 out of 175)—61.7% was also significantly higher than in control group (16 out of 50)—32%. The mean birth weight in anaemic mothers was 2.2 kg with a SD of .640 whereas in control group it was 2.6 ± .53.

TABLE I
Fetal Weight and Perinata Mortality in Severe Anaemia

Weight in kg.	Total babies		END		FSB		MSB	
	Anaemia	Control	Anaemia	Control	Anaemia	Control	Anaemia	Control
<1.0	2	3	0	1	1	1	1	—
1.0-1.4	19	3	7	2	7	1	4	—
1.5-1.9	37	2	12	1	11	—	4	1
2.0-2.4	50	8	2	1	14	—	3	—
2.5-2.9	52	20	2	—	10	—	1	1
3.0 & more	15	17	—	—	2	—	1	—
Total	175*	53	23	5	45	2	14	2

* 5 cases of twins.

Gestational age at the time of delivery

Severe anaemia may result in preterm labour Table II, shows the gestational age of babies at the time of delivery.

TABLE II
Gastational Age At the Time of Delivery

Gestational age in weeks	Anaemia group		Contol	
	No.	%	No.	%
<28	2	1.14	3	6
28-32	21	12.00	4	8
33-36	49	28.00	2	4
37 and more	103	58.86	41	82
Total	175	100.00	50	100

In anaemic patients 41.14% deliveries occurred preterm as compared to 18% in control cases.

Maternal Morbidity and Mortality

The mean hospital stay in anaemic patients was 10.2 days whereas in control group it was only 2.8 days. There were four maternal deaths in 170 anaemic patients (MMR—214.3/10,000 lives birth) whereas there was no maternal death in the control group.

Associated Obstetric Complications

APH cases were excluded from the study. The incidence of severe PIH in anaemic patients was 5.7% and 2% in control group. Eclampsia was present in 2.3% of anaemic patients and 0% in control cases. There were five (2.9%) cases of twins in anaemic group and none in the control group.

Discussion

Severe iron deficiency anaemia is associated with definitely increased perinatal mortality rates (Benson, 1984). Same is proved in the present study. The mean birth weight in severe anaemia patients was 2.52 ± 0.33 kg in a study by Jain *et al* (1985). In this study it was 2.2 ± 0.6 kg. The maternal mortality and morbidity is also significantly increased.

References

1. Benson, R. G.: "Current obstetric and gynaecologic diagnosis and treatment", 5th Ed., Lange Medical Publications, USA, 1984, p. 892.
2. Jain, L., Saxena, S., Sharma, U. and Shivpuri, D.: J. Obstet. Gynec. India, 4: 674, 1985.

TABLE I
Birth Weight and Perinatal Mortality in Severe Anaemia

Gestational age (weeks)	Anaemic group		Control group		Total
	No.	%	No.	%	
<28	2	1.14	3	6	5
28-32	21	12.00	4	8	25
33-36	49	28.00	2	4	51
37 and more	103	58.86	41	82	144
Total	175	100.00	50	100	225