EPIDEMIOLOGY OF VERY LOW BIRTH WEIGHT BABIES (VLBW)

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SUMMARY

A retrospective analysis of 194 cases delivered of babies less than 1.5 kg., admitted to St. John's Medical College Hospital from June 1989 to June 1993 was done. Total No. of deliveries during this period was 5548. The incidence of VLBW is 3.49%, 65.9% mothers were in the age group between 20 and 30 years. 79 cases were primigravidae i.e. 40.7%. Fifty one (26.3%) babies belonged to gestational age < 28 weeks, while 20 babies were more than 37 weeks gestation. Incidence of intrauterine death was 38.3%. Pregnancy induced hypertension was the commonest etiological factor seen in 85 cases (43.9%). Eclampsia was seen in 10.82% of the PIH cases. Premature rupture of membranes was seen in 39 cases (20%).

Antepartum haemorrhage was seen in 15.97%. Incidence of twins was 4.6%. Two triplets were observed in this study. 17 babies had gross congenital malformations. Neural tube defects was the commonest malformation i.e. in 14 cases.

Spontaneous preterm labour was seen in 40 cases i.e. 20.61%. 65.4% patients had a spontaneous vaginal delivery, while 39 patients had assisted breech delivery. Caesarean section was done in 23 cases i.e. 11.85%.

Female babies constituted 62.3% of the total. Birth weight more than 1.0 kg was seen in 132 babies i.e. 64.0%. 100% mortality was observed in the babies with birth weight < 700 gm.

Total mortality rate 66.5%. Survival improved with improvement in birth weight. 57.5% babies with birth weight > 1.4 kg. survived. Causes of mortality included prematurity, birth asphyxia, septicaemia, jaundice, respiratory distress syndrome etc.

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INTRODUCTION

A remarkable increase in the quality of perinatal and neonatal services has made survival of the very low birth weight infant i.e. < 1.5 kg a reality. Hence we thought that a epidemiological study of these VLBW was in order. Not much information is available for this group of neonates.

MATERIAL AND METHODS

A detailed retrospective analysis of 194 cases delivered of babies less than 1.5 kg. admitted to St. John's Medical College Hospital from June 1989 to June 1993 was done.

RESULTS AND OBSERVATIONS

The cases were analysed with respect to maternal age, parity, gestational age, etiological factors, mode of delivery, birth weight and mortality. These results are presented in figure I to VI.

DISCUSSION

Preterm delivery will follow either a decision to terminate the pregnancy

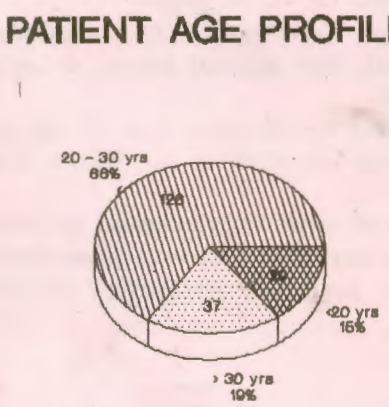

Fig. 1

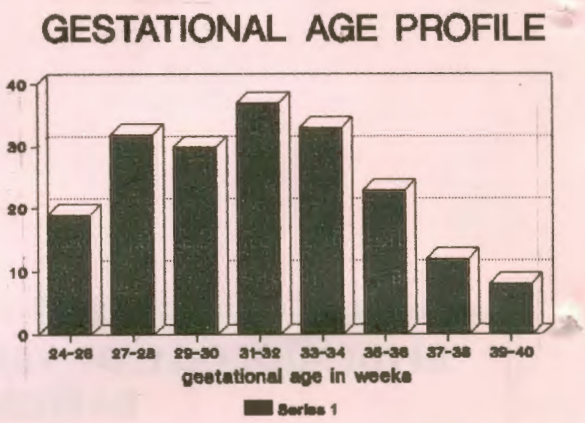

Fig. 2

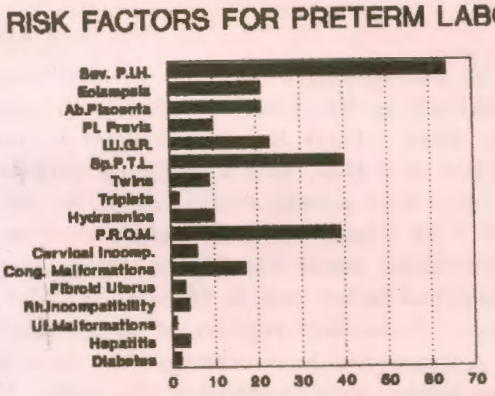

Fig. 3

before term for fetal or maternal reasons or Spontaneous preterm labour (Bennet & Elder 1988).

Preterm labour was commonest in the 20 to 30 years age group (65.9%). Teenage pregnancies were seen in 14.9% cases.

40.7% patients were primigravidae. 26.3% patients had a gestational age less than 28 weeks. 20 babies were of a gestational age more than 37 weeks. 79 IUDS i.e. 38.3% were observed in this

DISTRIBUTION OF MODE OF DELIVERY

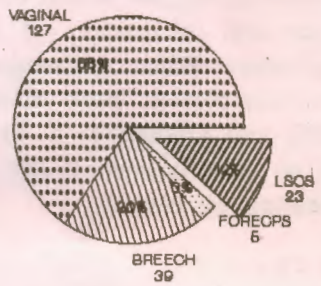

Fig. 4

BIRTH WT. & MORTALITY DISTRIBUTION

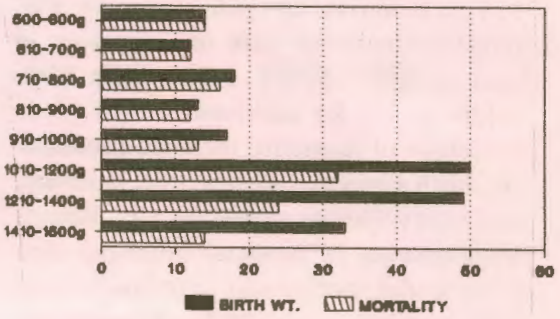

Fig. 6

SEX DISTRIBUTION OF V.L.B.W.

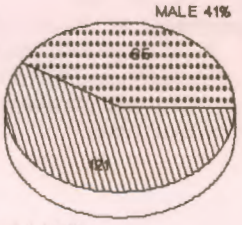

Fig. 5

study. Severe PIH including eclampsia was the commonest high risk factor observed for elective preterm induction of labour. 21 cases of the 85 cases with severe PIH had eclampsia i.e. 10.82%. This has also been the observation of Bennet and Elder (1988).

Antepartum haeemarrhage was seen in 15.97% cases. Incidence of twins was 4.6% in this series. Previous studies in the United States by U. S Department of Health (1982) shows an incidence of 8.7% of all preterm births to be due to twins. 2 triplets were also observed in this study. 17 babies i.e. 8.76% babies had gross congenital malformations.

Neural tube defects was the commonest malformation seen in 14 cases out of 17. The remaining 3 cases had gross hydrocephalus.

Spontaneous preterm labour was observed in 40 cases i.e. 20.6%. Premature rupture of membranes was seen in 39 cases i.e. 20%. Incidence of Cervical incompetence was 3%. Intra uterine growth retardation was seen in 23 cases i.e. 11.85%. Other risk factors included Hepatitis (2.06%), Rh incompatibility (2.06%) BOH (3.6%) fibroid uterus (1.54%) diabetes (1.03%), uterine malformation (0.5%) etc. 65.4% patients had a spontaneous vaginal delivery. While 39 patients had an assisted breech delivery. Caesarean section was done in 23 cases (11.85%). Indications for caesarean included fetal distress, nonprogress of labour, chorioamnionitis etc.

There were 121 female babies (62.37%) and 85 male babies (41.2%). 132 babies had a birth weight more than 1.0 kg. i.e. 64.0%. 74 babies had a birth weight

less than 1.0 kg. 100% mortality was observed in babies with birth weight < 700 gm.

Total mortality rate was 66.5%. Survival improved with improvement in birth weight. 57.5% babies with birth weight > 1.4 kg survived.

Causes of mortality included prematurity, birth asphyxia, septicaemia, jaundice, respiratory distress syndrome etc. Recent developments in neonatal intensive care in particular mechanical ventilation have made survival below 28 weeks gestation or < 1.0 kg. less of a rarity. This is in contrast to a study of UK records three decades ago, which indicated no survivors under 1000 gm. Goldenberg et al (1984) have combined 13 studies derived from literature between 1978 and 1984 to show the increase in survival to be expected from one day or one weeks, delay in delivery at each gestational age. This shows average 2-3% per day depending on gestational age.

Delivery by caesarean section has been advocated in numerous and small uncontrolled studies which was beneficial to survival or quality of survival in these babies. When confounding variables were controlled, both Kitchen et al (1985) and Olshan et al (1984) could find no benefit even if the infant was presenting by breech.

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