

TAMING OF PERINATAL MORTALITY

NIMISH V. PILLAI • KUNTAL RAO • VANI RAMKUMAR • PRALHAD KUSIITAGI

SUMMARY

The battle with Perinatal Mortality (PNM) in India remains still unconquered. Present study analyses the PNM in rural satellite centres compared with the rest of the deliveries at our hospital. It highlights, how with institution of a package of basic perinatal care, adoption of risk approach and effective referral system, the challenge of PNM could be met. With ANM a key functionary for delivery of Primary Obstetric care, we have achieved a PNM of 17.5/1000 in rural community, much below the national target of 30-35/1000 by 2000 A.D.

INTRODUCTION

The high Perinatal Mortality Rate (PNM) in India is a multifaceted problem. It has thrown a challenge to both Obstetricians and Neonatologists. National PNM sub-committee proposes lack of adequate antenatal care, error/delay in management of labours and inadequate facilities for premature newborns as few factors responsible for high PNM. The main hurdles in meeting this challenge is lack of comprehensive primary care services, low literacy and poor socio-economic status of large segments of population. Present communication shows how good obstetrics and neonatal services rendered to the rural population at their

doorsteps, brings down PNM and ensures better fetal outcome.

MATERIALS AND METHODS

The rural based Kasturba Medical College, is situated in the Dakshina Kannada District of Karnataka. It is a 1000 bedded referral hospital attached and is drained by 7 satellite outreach village subcentres, placed about 20-40 KMs on an average. One ANM attends the antenatal clinic at each centre everyday and is available for services at all hours. Postgraduates of OBG department visit each centre twice a week for screening of high risk cases. Telecommunication facility is established between satellite centres and labour theatre of Kasturba Hospital. A Flying Squad is available to reach satellite centres all the time day and

Dept. of Obst. & Gyn. Kasturba Medical College, Manipal.

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night. The Perinatal Mortality of these subcentres is compared with that of the rest of the hospital deliveries.

OBSERVATIONS

Over a period of 4 years from May 1988 to May 1992 we had 5306 live births in our hospital (Group 1). While during the same period there were 4875 live births in rural centres (Group II). 838 Patients were referred from these centres either antenatally or in labour as high risk cases. Thus the total number of patients covered by the centre in this 4 year period were 5714 (Group III). The perinatal mortality in various subgroups is as given by Table I. The low risk cases delivered at centre had a PNM of 4.30/1000 live births while out of 539 cases referred from the centre there were 77 perinatal deaths. Thus the contribution of perinatal deaths from centres is only 98 out of total 5714 patients. Hence the overall PNM from rural centres is 17.15/1000 live births compared to PNM of 49.37/1000 live births from other hospital deliveries. The number of still births and neonatal deaths as given by Table II shows that about 60% deaths were intrauterine and rest 40% were neonatal deaths in first week with a

birth weight of more than 1000 gms. Perinatal deaths it is clear, are overwhelmingly due to inherent biological causes and maternal factors. A look at the various antenatal complications in still births (Table III) shows that about 40% of still births were a consequence of PIH and antepartum haemorrhage. Unlike in other tertiary care centres we did not see obstructed labour and rupture uterus as major contributing factors. Birth weight showed a significant relation to perinatal deaths. As many as 80% of perinatal deaths occurred in low birth weight category of less than 2500 gms. For neonatal deaths the major factor responsible was respiratory distress syndrome (Table IV).

Table II

Type of Perinatal Deaths

	Hospital Referral Centres		
	N = 262	N = 77	N = 21
Still Births	157	52	18
Neonatal Deaths	105	25	3

Table I

Perinatal Mortality in Subgroups

	No. of live births	No. of Perinatal deaths	PNM
Group I (Hospital deliveries)	5306	262	49.37
Group II (Delivery at Centre only)	4875	21	4.30
Group III (Total No. of Centre deliveries including referred high risk cases)	5714	98	17.15

Table III

Antenatal Complications in Still Birth

Complications	Hospital Referral Centres		
	N = 157	N = 59	N = 18
APH	47	24	—
Hypertensive Disorders of Pregnancy	38	15	—
Other Medical Disorders	25	—	3
Placental Insufficiency	11	08	05
Obstructed labour	6	—	—
Rupture uterus	4	—	—
Miscellaneous	26	12	10

DISCUSSION

We have compared perinatal deaths in rural centres well covered with obstetric primary care to those with other hospital deliveries. Hospital deliveries included referrals from other uncovered remote rural areas. We have achieved a perinatal mortality as low as 17.15/1000 live births in the population of rural satellite centres. This is comparable to PMR of 10 to 20 per 1000 live births in most developed countries of the world (Swyer 1980). Its significance lies in the fact that it has been achieved in a rural set up with penetration of health services into the community. We have adopted a risk approach at rural area with the help of ANM and OBG postgraduates. An excellent telecommunication and flying squad has further enabled us to avoid any error or delay in the management. Over 60% of perinatal deaths were associated with PIH and its complications like abruptio placenta. Prema-

Table IV

Analysis of Neonatal Deaths

Cause	Hospital Referral Centres		
	N = 105	N = 25	N = 3
RDS	42	9	3
Birth Asphyxia	10	4	—
Intracranial haemorrhage	16	8	—
Septicemia	11	4	—
Congenital anomalies	16	—	—
Meconium aspiration Syndrome	6	—	—
Rh isoimmunisation	2	—	—
Neocrotising enterocolitis	2	—	—

turity accounts for nearly 50% of perinatal deaths. Prematurity is therefore of considerable clinical importance and almost remaining an unsolved perinatal enigma. Government of India (1986) has laid down the targets of reducing perinatal mortality to 30-35 per 1000 live births, reducing the incidence of LBW Neonates to 10% and universalization of antenatal/natal care by trained birth attendants by the year 2000 A.D.

CONCLUSION

There should be decentralisation of emergency obstetric care, away from the district hospitals to the first referral level institutions at the periphery. These institutions should be equipped and staffed by persons trained in essential obstetric functions.

Therefore not only the identification of risk factors but also a good referral system supported with transport and first referral institutions are necessary as a part of primary MCH care if perinatal and maternal mortality rates are to be reduced in the developing Countries.

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A FIVE YEAR REVIEW OF MATERNAL MORTALITY

Dr. S. K. Das, Director, ICMR, New Delhi

SUMMARY

The report analyses the causes of maternal deaths over the last 5 years from 1981-1985 at four selected hospitals in New Delhi, India. During this time there were 1817 obstetric admissions, 6709 live births and 126 maternal deaths. Maternal mortality rate was 3.1 per thousand live births. Causes of deaths were the same over these years, except haemorrhage and toxemia being the leading causes amongst the direct causes and hepatic and uremic being the indirect ones. 80% deaths occurred within a week of hospital admission. Almost 70% deaths were due to preventable causes. These deaths could have been avoided by antenatal supervision, early detection of problems like anaemia and IHT, and timely referral to high risk cases in the hospital.

It is not possible due to poor recording of births and deaths and most data reported are from teaching institutions all over the country. Dr. S. K. Das, Director, ICMR, New Delhi, India. This report is based on data from 41 teaching institutions and shows a MATR of 3.1 per thousand live births during the year 1981-85. 1817 live births during 1981-85 in the MATR region from city to city in India. Lowest being reported from Kerala and Punjab. In 1981-85, 1000000 whereas highest is reported from Kerala, Punjab, Madhya Pradesh and Bihar. It indicates that the primary causes of the morbidity and the availability of health services are not uniform in the country. It is necessary to have a uniform system of recording and reporting of perinatal mortality in the developing countries. In India MATR was 40-50 times higher in comparison to developed countries. In 1981-85, 1817 live births in 1981-85, 1000000 whereas highest is reported from Kerala, Punjab, Madhya Pradesh and Bihar. It indicates that the primary causes of the morbidity and the availability of health services are not uniform in the country. It is necessary to have a uniform system of recording and reporting of perinatal mortality in the developing countries.