Research Paper

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Perinatal Mortality at Smt. Shardaben Chimanlal Hospital Saraspur, Ahmedabad:- A retrospective study

Medical Science

KEYWORDS : perinatal mortality, still birth, early neonatal death

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ABSTRACT

Objective:- To estimate magnitude , determinants of perinatal mortality and suggest measures for its reduction.

Background:-Perinatal mortality is mirror reflection of maternal and child health and socioeconomic environment of community.
- It is influenced by various medicosocial preventable causes.
- It can be reduced by improving maternal and child health services and by Health Education.

Methods:- A retrospective hospital based study of perinatal death among 4325 deliveries were conducted from July 2012 to June 2013 in our hospital.
- Fetomaternal factors like maternal age, religion,address,parity,mode of delivery,booking status,antenatal complications, baby's sex, birth weight,congenital anomalies,neonatal complications influencing perinatal mortality rate were tabulated and analyzed.

Result:- Perinatal mortality rate was 42.58/1000 total live births in our hospital.
- Maternal factors like inadequate antenatal care , prematurity , grand multiparity, antenatal complications and neonatal factors like low birth weight,prematurity were associated with increased perinatal mortality.
- The leading cause of still birth was preeclampsia.
- The leading cause of early mortality was prematurity.

Conclusion:- Apart from clinical cause high perinatal mortality was due to poverty,illiteracy,
- Lack of health awareness, inadequate antenatal care and delayed referral.
-Health education,identification of high risk mothers,timely referral,advanced life support of preterm neonate should
- significantly help to reduce perinatal death.

Introduction

- Perinatal mortality rate is mirror reflection of maternal health,socioeconomic environment and quality of obstretic and neonatal care in the community and the country.
- According to United Nations Millennium Declaration Goal ' Cutting under five mortality by two third by 2015 ' seems difficult to achieve without reducing perinatal death.
- According to WHO's estimate annually around 4 millions still births and neonatal deaths occur in the world.
- Perinatal mortality rate has greatly reduced in developed countries by highest standards of maternal, child health care and health awareness created by active involvement of UN and other organizations.
- But in developing countries , the picture is still very gllomy having 98% of global perinatal deaths.
- In India PNMR is 48.6/1000 total births.
- In Gujarat PNMR is 41/1000 total births.

Materials and methods

- SMT Shardaben Chimanlal Hospital is a tertiary referral hospital and teaching hospital situated in urban area Saraspur in Ahmedabad city.
- This is a retrospective hospital based study of all deliveries to review extent and determinants of perinatal mortality from July 2012 to June 2013.
- Parturition registers in labour room, death registers in NICU, case files of early neonatal death and case files of mothers of intrauterine death and still births were critically analyzed.

TABLE No:-1 Age of mother affecting perinatal mortality

FACTORS	NUMBERS	%
<20 YEAR	22	11.76%
21 TO 34 YEAR	155	82.88%
>34 YEAR	10	5.34%
TOTAL	187	100%

TABLE No:-2 Parity of mother affecting perinatal mortality

FACTORS	NUMBERS	%
Primi	95	50.80%
Multigravida	87	46.52%
Grand multipara	5	2.67%
TOTAL	187	100%

TABLE No:-3 Residental affecting perinatal mortality

FACTORS	NUMBERS	%
Urban	135	72.19%
Rural	52	27.80%
TOTAL	187	100%

As our hospital is tertiary referral hospital situated in urban area so more numbers of patients coming from urban area.

TABLE No:-4 Booking status of patients

FACTORS	NUMBERS	PERCENTAGE
Booked	130	69.51%
Emergency	57	30.48%
TOTAL	187	100%

As our hospital is tertiary referral hospital situated in urban area , as compared to booked patients number of emergency patients came to our hospital are less.

TABLE No:-5 Factors affecting perinatal mortality

Still birth	no	%	Neonatal Death	no	%
Maternal Factors					
(A)Obstetric					
Preeclampsia	32	43.24%	Prematurity	54	47.78%
PROM	6	8.10%	Birth Asphyxia	24	21.23%
Placenta previa	3	4.05%	Septicaemia	21	18.58%

Rupture Uterus	2	2.70%	Hypoxic Ischemic Encephalopathy	7	6.19%
Obstructed Labour	2	2.70%	Meconicum Aspiration Syndrome	4	3.53%
Severe Oligo	2	2.70%	Cardiac Anomaly	2	1.76%
Twin pregnancy	1	1.35%	Aspiration	1	0.88%
(B)Medical					
Jaundice	4	5.40%			
Gestational Diabetis	2	2.70%			
HIV (Unexplained)	1	1.35%			
Foetal Factors					
Breech	5	6.75%			
Congenital Anomaly	3	4.05%			
Cord prolapsed	2	2.70%			
Loop of cord around neck	2	2.70%			
Transverse lie	1	1.35%			
Unexplained	6	8.10%			
Total	74	100%	Total	113	100%

Preeclampsia(43.24%) was the most common cause of stillbirth 4.05% of stillbirths had gross congenital anomalies.

TABLE No:-6 Type of delivery affecting perinatal mortality

FACTORS	NUMBERS	%
PTVD	144	77.00%
FTND	33	17.64%
LSCS	10	5.34%
TOTAL	187	100%

TABLE No:-7 Sex Factor affecting perinatal mortality

FACTORS	NUMBERS	%
Male	133	71.12%
Female	54	28.87%
TOTAL	187	100%

In this study , there was 2.46 times higher perinatal mortality rate in males than females.

TABLE No:-8 Weight factor affecting perinatal mortality

FACTORS	Still birth	%	Neonatal death	%
<2.5kg	54	28.87%	91	48.66%
1 to 2Kg	43	22.99%	57	30.48%
2.1 to 2.5kg	11	5.88%	34	18.18%
>2.6Kg	20	10.69%	22	11.76%
2.6-3.0Kg	14	7.48%	10	5.34%
3.1-3.5Kg	5	2.67%	9	4.81%
>3.5Kg	1	0.53%	3	1.60%

TABLE No:- 9 NUMBER OF STILL BIRTH AND NEONATAL DEATH

STILL BIRTH	no.	%	NEONATAL DEATH	no	%
1.Fresh still birth	4	2.13%	Early neonatal death within 24hr	8	4.27%
2.IUD	70	37.43%	From24hr to 7 days	105	56.14%
Fresh IUD	57	30.48%			
Old macerated IUD	13	6.95%			
Total	74	39.57%	Total	113	60.42%

Result

- During the study period of 12 months there were 4325 deliveries , 64 sets of them were twins and one set was triplet delivery. Thus babies born were 4391.
- Out of these 74 were stillborn, 4204 were live born and 113 were early neonatal deaths.
- Perinatal mortality rate was 42.58/1000 total births.
- Stillbirth rate was 39.57/1000 total births.
- Early neonatal mortality rate was 60.42/1000 total births.
- Preeclampsia(43.24%) was the most common cause of stillbirth.
- 4.05% of stillbirths had gross congenital anomalies.
- Prematurity contributed either directly or indirectly to nearly half(47.78%) of early neonatal death. Followed by severe birth asphyxia.(21.23%)
- 4.27% of early neonatal death occurred in 24 hours.
- In this study , there was 2.46 times higher perinatal mortality rate in males than females.
- Perinatal mortality rate was inversely propotional to increasing birth weight and maturity of baby.
- Perinatal mortality rate was highest in extremely premature(<32 weeks), high in premature (33-36 weeks) and lowest among term babies.
- Steps for prevention of perinatal mortality rate
  1.excellent antenatal care
  2.early diagnosis of high risk pregnancies and its management
  3.timely referral to higher centre
  4.better availability of neonatal care
  5.well equipped neonatal care unit
  6.monthly stastics of perinatal mortality rate
  7.discussion on prevention of perinatal mortality rate
  8.measures should be taken for prevention of perinatal mortality rate.
  9.intrapartum monitoring
  10.Kangaroo mother care for neonates

It is the standard method of care for all newborn babies especially for preterm neonates.

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