MATERNAL MORTALITY

Comparative Review

Introduction

Forty seven papers on maternal mortality were read at the XVth All-India Obstetric and Gynaecological Congress held at Goa on 27th December 1969. As there was considerable overlapping of data it was decided to divide the papers into five groups having different aspects for comprehensive review.

GROUP I

STATISTICAL ANALYSIS OF MATERNAL DEATHS

Reviewed by

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MATERNAL MORTALITY

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MATERNAL MORTALITY

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MATERNAL MORTALITY IN MADRAS (TAMIL NADU) STATE

K. Bhaskar Rao, M.D., D. G.O.
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MATERNAL MORTALITY IN A BACKWARD COMMUNITY

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MATERNAL MORTALITY IN IRWIN HOSPITAL

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MATERNAL MORTALITY IN GOVERNMENT MATERNITY HOSPITAL, HYDERABAD

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MATERNAL MORTALITY

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MATERNAL MORTALITY IN A DISTRICT HOSPITAL IN WEST BENGAL

K. M. Gun, M.O. (Cal.), F.R.C.S. (Edin.), M.R.C.O.G.
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MATERNAL MORTALITY IN HOSPITAL PRACTICE

Perviz Heera, M.D., M.R.C.O.G.
S. K. Das, M.D.
Safdarjang Hospital, New Delhi.

A REVIEW OF MATERNAL DEATHS IN S.A.T. HOSPITAL, TRIVANDRUM

P. Kalyanikutty, B.Sc., M.B.,B.S., M.D., M.R.C.O.G., D.C.H. (Lond.).
K. Lalitha, M.B., B.S., D.G.O., M.D.
Medical College and S. A. T. Hospital, Trivandrum.

STUDY OF MATERNAL MORTALITY IN EDEN HOSPITAL IN THE YEARS 1967 AND 1968

M. Konar, M.B.,B.S., D.G.O., F.R.C.O.G.
Medical College, Calcutta.

MATERNAL MORTALITY DUE TO HAEMORRHAGE

A. V. Narayan Rao, M.D.
Kurnool Medical College, Kurnool (A.P.).

MATERNAL MORTALITY

Y. Pinto Rosario
Lady Harding Medical College & Hospital, New Delhi.

MATERNAL MORTALITY — A REVIEW OF MATERNAL MORTALITY IN GOVERNMENT MEDICAL COLLEGE HOSPITAL, NAGPUR, DURING 8½ YEARS PERIOD FROM 1-1-1961 to 30-6-1969

V. D. Sastrakar, M.D.
Medical College, Nagpur.

IMPORTANCE OF OBSTETRIC FLYING SQUAD IN REDUCING THE MATERNAL MORTALITY OF A SUBURBAN HOSPITAL

V. G. Kale, M.D., D.G.O.
Damayanti Hospital, Bombay.

SURVEY OF MATERNAL DEATHS AT VICTORIA ZANANA HOSPITAL, DELHI, IN THE LAST TEN YEARS

M. Kochhar, D.G.O., M.R.C.O.G., F.R.C.S.(E).
Victoria Zanana Hospital, Delhi.

MATERNAL MORTALITY

Prabhavathy Kunders, D.G.O., M.R.C.O.G.
Christian Medical College & Hospital, Vellore (S. India).

SOME ASPECTS OF MATERNAL MORTALITY IN INDIA

Priyamvada, M.B., B.S., M.S.
College of Medical Sciences, Banaras Hindu University, Varanasi.

COMPARATIVE STUDY OF MATERNAL MORTALITY IN RURAL COMMUNITY AND CITY TEACHING INSTITUTION

Kusum P. Shah, M.B., B.S., D.G.O., M.D.
J. M. DeSa Souza, M.D., F.R.C.S. (E).
D. Sawardekar, M.B., B.S.
R. V. Aphale, M.B., B.S.
Grant Medical College and J. J. Group of Hospitals, Bombay.

REVIEW OF MATERNAL DEATHS IN GOVERNMENT GENERAL HOSPITAL, GUNTUR, WITH SPECIAL REFERENCE TO SEPTIC ABORTIONS

N. Subhadra Devi, M.D., F.R.C.O.G., F.A.C.S., D.C.H. (R.C.P. & S.).
Guntur Medical College, Guntur.

ABORTION AS A CAUSE OF MATERNAL DEATH

Rama Vaish, M.S., M.R.C.O.G.
L. L. R. M. Medical College, Meerut.

STATISTICAL REVIEW ON MATERNAL MORTALITY

Introduction

In all seventeen papers on the subject were presented at the Congress.

These papers contributed statistics from various parts of our country. List of places can be seen from Table I.

To give the statistical data at a glance the figures have been tabulated but since the data is not uniform, tabulation was difficult.

Table I shows the mortality in various institutions given by various authors.

The maternal mortality rate is highest in Varnasi (Priyamvada), where the rate is 15.2 per thousand live births. The author states that there are only 5 maternity units in the city of Varanasi and due to a large influx of transfered cases late in labour, the rate of mortality is high.

Statewise we find that the maternal mortality remains high in Kurnool (N. Rao), Guntur (N. Devi) and Trivandrum (Kalyanikutty).

It is surprising to note that even in the city of Delhi the rate is approximately 7 per thousand live births. This is explained on the basis that the majority were emergency cases which were transfered late.

As given by K. P. Shah there is not much difference in the rate of Bombay city proper and that of Palghar (a rural area near Bombay). Majority of deaths in Palghar were due to haemorrhage. The lowest mortality was found to be in the state of Maharashtra.

Haemorrhage

From Table II, 60% of deaths were attributed to haemorrhage in the state of Varanasi (Priyamvada) and Tamil Nadu. Here there is poor availability of blood, hence the high mortality. Even in the city of Bombay where there are many blood banks the mortality from haemorrhage is as high as 10-20%.

Majority of deaths in this group were due to postpartum haemorrhage. Though non-availability of blood was a major contributing factor, it also emphasises the inadequate intranatal care.

There was high incidence of rupture uterus in West Bengal, all of them being late emergency admissions. There was no case of rupture of previous caesarean section scar.

Toxaemia

Table III shows deaths due to toxaemia. Here there is nothing much to comment on as the majority of cases died of eclampsia. It is interesting to note that though the treatment of toxaemia varies from place to place the mortality rate is more or less the same. A high incidence of eclampsia deaths in our country is a direct reflection on poor antenatal care and late admissions of patients from rural areas.

Associated conditions

Table IV shows deaths due to medical disorders. Here the motality is high due to infective hepatitis as reported by most of the authors. In all 82 cases of infective hepatitis have been reported by different authors.

It is worth noting that centres like Delhi show a high incidence of deaths from anaemia.

TABLE I

Statistical Review of Maternal Mortality

1. Author and place	No. of deliveries & year of Study	Mortality rate per 1000 live birth.	1000 total birth	Haemo-rrhage.	Toxaemia	Infections.	Medical Diseases	Abortions.	Opera-tions.	Miscel-laneous.
1. N. Rao, Kurnool	1964-68	11.3	..	22%	15.5%	10.5%	40%	..	..	..
2. N. Devi, Guntur	39,677 1958-68	13.1	..	..	..	..	..	..	..	..
3. Kalyanikutti, Trivandrum	15,814	7.3	..	..	..	..	27%	..	..	..
4. Pinto Rosario, Delhi	14,996 1966-68	7.5	..	11.6%	6.2%	29.4%	15%	18%	..	..
5. A. Dass Delhi	12,678 1963-68	..	8.4	37%	15%	15%	20%	20%	..	..
6. L. Ashar Bombay	25,996 1965-69	5.4	..	10%	6%	6%	..	10%	..	..
7. Bhaskar Rao Tamilnadu	..	..	4.5	60%	..	..	..	..	..	..
8. Priyamvada Varanasi	39,258 1964-68	15.2	..	60%	30%	8%	2%	1%	..	4%
9. K. M. Gun Calcutta	24,265 1964-68	..	2.2	32%	28%	10%	14%	5%	..	18%
10. Kamal Das Bihar	4,038	..	2.8	15%	9%	15%	..	..	4.5%	0.9%
11. Heera Delhi	41,215 1962-68	11.2	..	46%	8.5%	70%	43%.2	22%	..	..
12. Gosh Bengal	...	2.9	..	15%	18%	6.5%	17%	..	..	..
13. K. P. Shah Bombay	1961-69	2.9	..	21.1%	6.3%	5.5%	3.9%	14%	1.6%	..
Palghar	1961-69	2.2	..	40.8%	11.1%	14.8%	..	3.7%	..	..
14. Kochar Delhi	61,821 1958-68	2.7	..	46%	16%	20%	16%	..	..	..
15. Shastrakar Nagpur	26,300 1966-68		11.93	..	..	..	8%	..	..	..
16. Achari Patna	..	..	..	18.4%	18.4%	3.8%	0.6%	..	..	..
17. Durgamba Hyderabad	81,000 1958-68	5.3	..	18.6%	15.9%	15.9%	16.4%	..	..	10%

TABLE II

Deaths due to Haemorrhage

No.	Name	Place	Total deaths	Total deaths due to haemorrhage	Placenta praevia	Accidental haemorrhage	P.P.H.	Ruptured uterus	1st trimestor.
1.	Bhaskar Rao	Madurai	....	..	..	..	..	..	..
2.	L. Ashar	Bombay	140	14	1	4	6	1	2
3.	A. Dass	Delhi	65	39	5	2	6	10	16
4.	P. Rosario	Delhi	125	31	6	1	1	1	22
5.	Kalyanikutty	Trivandrum	112	29	3	6	11	4	..
6.	S. Devi	Guntur	559	40	10	9	6	..	15
7.	Narayan Rao	Kurnool	258	96	10	20	23	34	9
8.	Priyamvada	Varanasi	488	45	25	..	20	..	..
9.	K. M. Gun	W. Bengal	333	127	14	10	39	29	35
10.	K. Das	Bihar	116	31	1	1	12	17	..
11.	P. Heera	Delhi	562	123	..	..	..	..	123
12.	Ghosh	W. Bengal	107	..	..	..	..	..	..
13.	K. P. Shah	Bombay	303	59	6	..	23	9	21
14.	Kochar	Delhi	112	42	12	5	10	12	3
15.	Shastrakar	Nagpur	114	49	3	9	17	18	2
16.	Achari	Bihar	....	..	..	..	..	..	..
17.	Durgamba	Hyderabad	437	125	15	23	53	31	3
18.	Konar	Calcutta	158	33	..	..	26	7	..

TABLE III

Deaths due to Toxaemia

No.	Name	Place	Total deaths	Total toxaemia deaths.	Pre-eclampsia.	Eclampsia
1.	Bhaskar Rao	Madurai	..	..	..	..
2.	L. Ashar	Bombay	140	9	1	8
3.	A. Dass	Delhi	65	8	1	7
4.	P. Rosario	Delhi	125	7	1	6
5.	Kalyanikutty	Trivandrum	112	17	2	15
6.	S. Devi	Guntur	559	33	3	30
7.	Narayan Rao	Kurnool	258	68	4	64
8.	Priyamvada	Varanasi	488	60	4	56
9.	Gun	Calcutta	333	141	..	141
10.	K. Das	Bihar	116	9	2	7
11.	Heera	Delhi	562	15	15	..
12.	Ghosh	W. Bengal	107	..	..	..
13.	K. P. Shah	Bombay	303	21	..	21
14.	Kochar	Delhi	112	16	6	10
15.	Shastrakar	Nagpur	314	30	..	30
16.	Achari	Bihar	158	20	..	20
17.	Durgamba	Hyderabad	407	65	5	60
18.	Konar	Calcutta	158	28	..	28

TABLE IV

Deaths due to Medical Disorders

No.	Name	Place	Total cases	Cause of death due to medical disorder.	Heart Disease	Hepatitis	Anaemia	T.B.	Diabetes	Embolism	Miscellaneous.
1.	Bhaskar Rao	..	..	..	..	..	..	..	..	..	..
2.	L. Ashar	Bombay	140	56	8	20	13	..	..	3	12
3.	A. Dass	Delhi	65	35	9	6	12	1	..	2	5
4.	P. Rosario	Delhi	125	37	7	12	11	..	..	..	7
5.	Kalyanikutty	Trivandrum	112	36	14	7	3	..	1	1	10
6.	S. Devi	Guntur	559	86	11	4	39	..	..	21	11
7.	Narayan Rao	Kurnool	258	..	..	..	..	..	..	..	..
8.	Priyamvada	Varanasi	483	..	..	..	..	..	..	..	..
9.	K. M. Gun	Burdwan	333	52	16	1	..	2	..	..	23
10.	Kamal Dass	Bihar	116	..	..	..	..	..	..	..	..
11.	P. Heera	Delhi	562	143	30	..	70	..	..	16	27
12.	T. K. Ghosh	Bengal	107	..	..	..	..	..	..	..	..
13.	K. P. Shah	Bombay	303	73	8	32	11	7	..	5	10

Although pulmonary tuberculosis is rampant in India, the incidence of deaths due to tuberculosis is not high as reported by most of the authors, the highest being from Nagpur (Shahstrakar).

There are no comments to offer regarding deaths due to diabetes.

Although more details of medical disorders have not been mentioned in most papers, the few papers that have are included in the comments.

Maternal Mortality due to Abortion:

There were two papers discussing maternal mortality due to Abortions.

At Guntur Hospital (Subhadra Devi) deaths due to abortion constituted to about 22%. Majority of cases were due to criminal intervension.

At the Meerut Medical College (Rama Vaish). The percentage of Maternal deaths due to abortions was 18. The commonest cause of death in the series was haemorrhage, sepsis and shock in order of importance. The author stresses the fact that though the overall mortality is decreasing, the mortality due to abortion is on the increase.