

NURSERY NEONATAL MORBIDITY AND MORTALITY IN THE PHILIPPINE GENERAL HOSPITAL

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The importance of maternal health or the immediate environment of the fetus which influence the first few days of life cannot be overemphasized. The antenatal growth and development helps in determining the ultimate health of the child. The different maternal factors affecting the fetus during pregnancy and the difficulties it undergoes during birth influence the newborn (1, 2). For this reason, good prenatal care which ensures a healthy environment for the fetus can better assure the optimum growth and development of the latter.

MATERIAL

The cases studied were the newborn from the nursery of the Philippine General Hospital. The average hospital stay of the full term normal babies is 2 to 5 days while those of the abnormal and Cesarean babies is 10 to 12 days. The smaller prematures stayed a little longer but no baby over 30 days of age was included in the series.

The aims of antepartal care with regard to the fetus are (a) reduction of prematurity, stillbirth and neonatal mortality rates and (b) optimal health in the newborn (3). The following table shows the neonatal mortality from 1955 to 1958.

Table 1. NEONATAL MORTALITY IN THE NURSERY OF THE PHILIPPINE GENERAL HOSPITAL, 1956-1958

	1955	1956	1957	1958
Total Live Births	7891	8569	8121	8631
Total Deaths	372	320	399	389
Mortality per 1000 Live Births	46.6	37.4	47.7	45.0

The neonatal mortality rate shown above is much higher than those reported by other workers (3, 4, 5, 6). The next table gives the premature and term neonatal deaths for the years 1956 and 1958.

Table 2. NEONATAL DEATHS FOR 1956 AND 1958

	1956	1958
Total Stillbirths	190	236
Total Livebirths	8559	8631
Full Term	7690	8126
Premature	869	505
Neonatal Deaths		
Full Term	57	84
Premature	268	305
Neonatal Death Rate		
Full Term	0.7%	1.0%
Premature	30.3%	60.4%

An examination of the records of the stillbirths show that majority of the mothers had no adequate prenatal care. Many had only one or at most three consultations in the last trimester of pregnancy while some had none at all. Only those with chronic disease visited their physicians oftener but in many instances were also not adequately managed. In fact, many were malnourished, with nutritional edema, iron deficiency, anemia, vitamin deficiency, hypoproteinemia, dermatosis of all sorts, pulmonary tuberculosis, heart and renal diseases. It can readily be seen that some of these stillbirths could have possibly been avoided with more adequate prenatal care (7).

Table 3. MATERNAL FACTORS CONTRIBUTING TO PREMATURE DELIVERIES

	1954	1955	1957
Toxemia of Pregnancy	81 (29.5%)	75 (23%)	93 (23%)
Multiple Pregnancy	47 (17%)	42 (12.9%)	38 (9.4%)
Placenta Previa	33	19	43
Premature Labor	10	31	26
Cardiovascular Disease	6	6	12
Abruptio Placenta	5	4	9
Early Rupture of Bag of Waters	5	6	14
Abnormal Presentation of Fetus	10	4	9
P.T.B. & Other Illnesses (Chronic)	5	7	12
Unknown Causes	88	132	147

From Table 2, it can also be seen that the death rate in premature infants is 50 to 60 times those of the full term infants. It can be safely said that if we can reduce prematurity, we will lower infant mortality. It is therefore pertinent to review the different maternal factors that contributed to premature deliveries to find out if some of them are preventable.

About 23 to 29.5 percent of the premature births were precipitated by toxemia of pregnancy. This is rather high because in other countries, toxemia of pregnancy is no longer a frequent contributory factor to prematurity (3). It will also be seen that multiple pregnancy ranks second to toxemia as a contributing factor to premature delivery. If we can but lower maternal toxemias to prevent premature labor and if we can also prevent premature delivery in multiple pregnancy by early diagnosis so that the patients will accept proper care, then we will reduce neonatal mortality rate in the Philippines.

It will be interesting to review the diseases of the newborn to know if some of them can be prevented.

Table 4. NEONATAL MORBIDITY FOR 1956 TO 1958

DISEASES	1956	1957	1958
Congenital Pulmonary Atelectasis	51	58	75
Bronchopneumonia	63	71	84
Aspiration Pneumonia	36	39	16
Pulmonary Hemorrhage	25	19	15
Congenital Malformations	26	20	21
Hyaline Membrane with Resorption			
Atelectasis	25	19	15
Infectious Diarrhea	14	22	11
Intracranial Hemorrhage	19	26	21
Sclerema Neonatorum	7	14	12
Intra-abdominal Hemorrhage	7	5	2
Omphalitis	6	8	11
Peritonitis	5	2	4
Hemorrhage of the Newborn	5	4	3
Asphyxia Neonatorum	4	5	12
ABO Incompatibility	2	0	0
Brachial Plexus Injury	3	4	6
Fractures	3	5	6
Conjunctivitis	2	0	3
Suppurative Meningitis	0	1	0
Septicemia	1	0	1
Undiagnosed	11	15	21

Table 4 shows a high incidence of infection, a condition that is not only preventable (8), but perhaps even if present can be successfully combated with antibiotics and chemotherapeutic agents if recognized and treated early. A fairly good number of the diseases are due to difficulties in delivery. Better judgment and timely intervention by more expert hands will surely prevent many of these accidents (9), and thus reduce neonatal mortality rate.

Even the autopsies of 819 newborns in 1956 corroborate the high incidence of infection and trauma.

Table 6. CAUSES OF DEATHS, 1956(10)

DISEASES	Number	Percent
Interstitial Pneumonia	3	0.94
Bronchopneumonia (lobular)	39	12.23
Aspiration Pneumonia	37	11.60
Hyaline Membrane	46	14.42
Pulmonary Atelectasis		
Partial	98	
Massive	55	17.24
Pulmonary Hemorrhage	62	19.44
Pulmonary Abscesses	5	1.59
Hemothorax	1	0.31
Empyema Thoracis	1	0.31
Hemorrhage in the		
Adrenals	17	5.34
Kidneys	9	2.82
Liver	10	3.14
Spleen	3	0.94
Intracranial Hemorrhage	11	3.43
Congenital Anomalies	8	2.51
Cyclops (1)		
Anencephaly (1)		
Horseshoe Kidney (1)		
Biliary Atresia (1)		
Intestinal Bands (1)		
Intestinal Atresia (1)		
Heart Diseases (2)		
Ulcers, Stomach	2	0.62
Peritonitis	4	1.26
Primary (2)		
Sec. to volvulus (1)		
Sec. to Diverticulum (1)		

DISEASES	Number	Percent
Omphalitis	2	0.62
Infectious Esparitis	1	0.31
Meconium Peritonitis	1	0.31
Focal Pancreatitis	1	0.31
Erythroblastosis	1	0.31

A review of the different causes of deaths easily reveals that about 30% of these was due to infection of some sort. Whether the infection was contracted prenatally or postnatally, the fact is, our mortality due to this condition is much higher than those reported from other progressive countries of the world. Some of these infections are not only preventable, but if they cannot be prevented, early diagnosis and proper treatment will save some of these newborn babies. Then, if you add to these infections, the hemorrhages in the brain and other organs which are avoidable in many instances, neonatal mortality rate in the Philippines will significantly go down.

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