PROBLEMS OF REPEATED PREMATURE DELIVERIES

(Analysis of 130 cases)

by

M. BHATTACHARYYA,*

S. D. SHINDE,**

S. WAGLE,***

and

V. N. PURANDARE,****

Introduction

Repeated premature deliveries remains one of the foremost obstetric problem all over the world. The problem is particularly severe in developing countries due to the low socio-economic status combined with ignorance, illiteracy, superstitions, and of course, a lack of basic medical amenities to a large number of the rural population.

In order to achieve a favourable outcome in such cases it is of paramount importance that all these patients are thoroughly investigated to detect the cause. A vigilant antepartum as well as intrapartum care is also essential. However, the risk of premature delivery increases in a woman with previous history of premature labour. In these cases, the intensive neonatal care is very important to reduce the perinatal morbidity and mortality.

Material and Method

A total number of 130 cases with a history of repeated premature deliveries attending the "High Risk Pregnancy Clinic" of the Department of Obstetrics and Gynaecology, K.E.M. Hospital, Bombay, during a 3 year period (1975-1978) have been analysed.

Among these, 88 patients came during pregnancy while 42 presented in the non-pregnant state.

All these 42 patients who were not pregnant at the time of reporting were clinically examined and investigated. The probable cause could be detected in 8 (19.04%) cases only. These were, Rh isoimmunisation in 2, Syphilis in 2, Diabetes in 1 and uterine anomalies in 3. Of the remaining cases, the possibility of pre-eclampsia and incompetent os were considered but could not be confirmed.

The pregnant group of patients were similarly investigated and managed throughout their pregnancy.

Majority of the patients, 72, (81.82%) belonged to the age group between 21 and 30 years.

Though 58, two thirds of the patients had 2 previous premature deliveries, as many as 13.65 per cent had 4 or more previous premature deliveries.

Ten cases had previous abortion in the first trimester and 20 had a previous abortion in the second trimester.

All these patients were examined care-

*Asst. Prof. of Obstetrics and Gynaecology.

**Tutor in Obstetrics and Gynaecology.

***Research Officer.

****Head of the Dept. of Obstetrics and Gynaecology.

From: Department of Obstetrics and Gynaecology, K.E.M. Hospital and Seth G.S.M. College, Parel, Bombay-400 012 (India).

Accepted for publication on 15-2-79.

fully and were investigated thoroughly. At the initial visit the following investigations were routinely carried out to detect a probable cause. Haemoglobin estimation, blood grouping, V.D.R.L., glucose tolerance test, blood urea Nitrogen and serum creatinine and urinary culture.

These patients were called for regular antenatal check-up in the "High Risk Pregnancy Clinic" every fortnightly. Those who failed to turn up regularly were motivated by the social-workers through home-visits. The importance of regular check-up was emphasized.

During the check-up, apart from the general and abdominal examinations, vaginal examination was carried out to detect an incompetent os. Almost all the patients were hospitalized during the 28th to 36th week of pregnancy, to avoid recurrence of premature labour.

Table I shows that incompetent os was detected during pregnancy between 20 and 30 weeks, in about one fifth of the patients. Syphilis was the second most known common factor while in not less than 46 per cent of our patients the occurence of repeated premature labours remained unexplained.

In addition to regular antenatal check-up and prolonged hospitalization (during the critical period) the following measures were taken:

TABLE I
Probable Etiological Factors

Etiological Factors	No. of cases	Percentage
Incompetent os	19	22.95
Syphilis	11	12.5
Diabetes	7	7.9
Uterine anomaly	1	1.13
Hypertension	8	9.09
Asymptomatic bacteruria	3	3.40
No detectable cause	41	46.58

Uterine relaxants like Isoxuspurine and Nyldrine Hydrochloride, was used for all the patients. Tightening of os was done in 19 patients. Syphilis was treated by injection Benzathine Penicillin 4.8 mega units. (The husbands were treated simultaneously). Diabetes was controlled by oral antidiabetics or insulin. Hypertension was managed by prolonged hospitalization and antihypertensives. Urinary tract infection was eradicated by appropriate urinary antiseptics.

Results

As seen in Table II, the fetal salvage rate was the lowest (61.59%) in cases

TABLE II
Outcome in Various Pathological Conditions

Pathological Conditions	No. of cases	F.T. Live Births	Premat. Deli.	Still Birth	Abortions	Fetal Salvage Rate
Incompetent os	19	14	2	—	3	84.25%
Syphilis	11	8	2	—	1	72.72%
Diabetes	7	5	1	—	2	71.42%
Hypertension	8	6	1	—	1	87.5%
Uterine anomaly	1	—	—	—	1	—
Urinary tract infection	3	3	—	—	—	100%
Unexplained	41 LTFU—2	24	8	3	4	61.59%

*LTFU—Lost to followup.

where the etiology of repeated premature deliveries remained unknown even after investigations.

Table III shows that of the 13 premature vaginal deliveries, 10 died in the neonatal period i.e. out of a total of 88, in all 61 patients went home with a live baby, thus giving us a success rate of 80.26%.

TABLE III
Outcome

Outcome		Mode of Delivery	
Live Births	71	F.T.N.D.	53
Still Births	3	Premature vaginal delivery	13
Abortion	12	L.S.C.S.	5

Discussion

Concern for the fate of premature infants has been documented since Richard III's lament that "he was sent before my time into this breathing world scarcely half made up......".

The problem of repeated premature deliveries in a woman is one of the major problems that one faces in the "High Risk Pregnancy Clinics" of our country.

Innumerable studies on prematurity point to the fact that the lowest group in the socio-economic level of any civilization also has the highest prematurity rate in any society. The higher incidence of prematurity in the hospital class of patients as against the clinic patients also points to the same direction.

About 50% of premature deliveries occur for no known cause. The other etiological factors for initiation of premature labor are chronic hypertensive vascular disease, abruptio placentae, placenta previa and untreated syphilis, in addition to pre-eclampsia and eclampsia.

Incompetent os is known to produce [illegible]nd trimester abortion but in cases of repeated premature deliveries with associated history of second trimester abortions-tightening of os at an appropriate time has given us very encouraging results (F.S.R. of 84.25%). Tightening of os has been done as late as the 32nd week of pregnancy when there is evidence of the cervix yielding to the increasing pressure on it from the intra-uterine contents. The Shirodkar operation was carried out in 9 patients and Macdonald's method in 10.

Kierse *et al* (1978) quote that patients with one previous spontaneous preterm delivery as well as one or more abortions had a 37% chance of delivering preterm in their next pregnancy-a risk of one in three. The risk increases to 70 percent in those who had 2 or more preterm deliveries. This data indicates that spontaneous preterm delivery tends to be a repitative process, which may have similar etiology in successive pregnancy.

However, in our series of 88 patients with a history of 2 or more previous premature deliveries, we could achieve a term delivery in 58 patients i.e. 65.9% and a fetal salvage rate of 80.26%.

More and better prenatal care is not however the complete solution to the problem of prematurity nor is diet supplementation during the pregnancy the answer. Correction of economic deprivation just during pregnancy is not going to prevent prematurity.

The answer lies in raising the standards of living of the underprivileged, the underfed, the underhoused and the undereducated, so that this group gets assimilated in the middle class of social status. The problem is indeed an enormous one as in the city of Bombay alone, no less than a million people continue to live in the worst of slums or the pavements of the street.

Summary

1. One hundred and thirty cases of repeated premature deliveries have been analysed.

2. Eighty-eight of these presented in the pregnant state.

3. In 46.58% of the cases the cause of repeated premature deliveries remained unexplained.

4. Of eighty-eight patients, 61 went home with a live baby, a fetal salvage rate of 80.26%.

5. Etiological factors and the possible preventive measures are discussed.

Acknowledgement

We thank Dr. C. K. Deshpande, Dean, K.E.M. Hospital and Seth G.S. Medical College, for allowing us to publish the hospital data.

References

1. Keirse, M. J. N. C., Rush, R. W., Anderson, A. B. M. and Turnbull, A. C.: Br. J. of Obstet. Gynaec. 85: 81, 1978.