

TEENAGE PRIMIGRAVIDAE

by

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SUMMARY

A comparative study of the obstetric behaviour and outcome of pregnancy in 1496 teenage primigravidae amongst 17,633 deliveries has been undertaken. The incidence of toxæmia and eclampsia was found to be higher in teen-age patients. Caesarian section rate was found to be lower. There was no other maternal complication.

The prematurity rate and perinatal mortality rate were slightly more in new born babies of teen-age primigravidas.

Introduction

Statistics reporting the pregnancy and labour in adolescent girls and teen-age women have been brought to light by many studies in relatively recent years. The opinion of different authors vary regarding the characteristic of childbearing in this tender age. From these studies it appears that the opinion is unanimous regarding the incidence of pre-eclamptic toxæmia which is increased in teen-age gravidas but there is no unanimity regarding the occurrence of prolonged labour, increased caesarean section rate or prematurity etc.

In the present study an attempt has been made to find out the obstetric behaviour of primigravidas under the age of 19 years and to compare the same to the older gravidas.

Material and Methods

The teen-age primigravidas of age 19

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years and below admitted in R. G. Kar Medical College Hospital, Calcutta during the two years period 1981 and 1982 have been considered for the present study. The maternal complications during pregnancy and labour, the duration of labour, the mode of delivery and the foetal outcome of the teen-age mothers have been studied and compared with a control series of older mothers. The teen-age pregnancy which terminated in abortion—spontaneous or induced—has been excluded from the present study.

Results and Analysis

Out of a total delivery of 17,633 total primigravidas were 5,436, the teen-age primigravidas being 1,496 (8.4 per cent of total mothers delivered).

The comparative analysis of the obstetric behaviour and the foetal outcome of the teen-age primigravidas with that of control series is shown in Tables II and III.

TABLE I
Age Distribution

Age	Below 14 years	14-16 years	17-19 years	Total
No. of patients	Nil	312	1184	1496

TABLE II
Obstetric Behaviour of Teen-age Mothers and Control Series

	Total No. of patients	Toxaemia		Eclampsia		C. S. Rate	
		No. of cases	Per cent	No. of cases	Per cent	No. of cases	Per cent
Teen-age	1496	147	9.8	33	2.2	31	2.1
Control	17633	282	1.6	194	1.1	1569	8.9

TABLE III
Foetal Outcome of Teen-age Mothers and Control Series

	Total No. of patients	Prematurity		Still birth		Perinatal Mortality	
		No. of cases	Per cent	No. of cases	Per cent	No. of cases	Per cent
Teen-age	1496	518	34.6	48	3.2	75	50.1
Control	17633	5741	32.9	705	4	859	48.7

Discussion

Teen-age or adolescent pregnancy is a common occurrence in India. The incidence of teen-age primigravidae in the present series is 8.4 per cent. Teen-age pregnancy rate varied from 8-14 per cent in some previous studies in India (Sen 1974; Ghosh and Ghosh, 1976 and Philips and Sivakamasundari 1978).

The pregnancy of teen-age primigravida is relatively free of complications. The only major problem in the antenatal period found in the present series was pre-eclamptic toxæmia and the occurrence of eclampsia 2.2%. In the present study, the incidence of toxæmia was much higher in teen-age primigravidas (9.8%) as compared to the control series (1.6%). The reported incidence of toxæmia varied from 3.4 (Semmens and

McGlamory 1960) to 28 per cent (Mussio 1962). A raised incidence of toxæmia was reported by Mussio (1962) Maichetti and Menaker (1950), Aznar and Bennet (1961), Sen (1944) and Philips and Sivakamasundari (1978), but Briggs *et al* (1962) reported a diminished incidence. Machetti and Menaker 20% of whose adolescent patients developed P.E.T. in spite of adequate antenatal care, emphasized that there must be some additional factors concerned other than good prenatal care. To fit their observation, these authors hypothesized that an underdeveloped endocrinal system may be a cause of frequent toxæmia. Whatever, the explanation our study showed a similar augmentation of P.E.T.

In the present series labour was not found to be unduly prolonged in teen-age

primigravidas than the control series, as pointed out by workers like Bochner (1962), Aznar and Bennett, Mussio (1962) Israel and Wountersz (1963). As regards the type of delivery, in the present series 1272 (85%) had spontaneous vaginal delivery, 157 (10.4%) had forceps delivery and 37 had assisted breech delivery (2.5%) which was more or less same in the control series. Thirty patients had undergone caesarean section—the caesarean section rate being 2.1%). Sinclair (1952) delivered 95% of young primigravidae spontaneously. American series shows a higher frequency of forceps delivery. The high frequency of forceps delivery was not due to difficulty of labour, but to the need to allay fear and apprehension.

Caesarean section rate was found to be lower in teen-age primigravidas (2.1%) as compared to the control series (8.9%) in the present series. In most reported series the incidence of abdominal delivery of teen-agers was considerably lower than that of the older control groups. (Mussio 1.0%; Isreal and Wountersz 3.6%; Semmens and McGlamory 3%) Maichetti and Menaker and Arhet and Nelson found higher incidence of 6% and 9% respectively). Philips and Sivakamasundari (1978) found the caesarean section rate in the series of teen-agers to be 6.56%.

The Newborn of the teen-age primigravidas in the present series showed a prematurity rate of 34.6%, but higher than 32.9% in control series, similar to that found by Philips and Sivakamasundari 30.8%. The still birth rate and the perinatal mortality rate was more or less similar to those of control series. It is generally stated by the workers of the developed countries that the incidence of prematurity, fetal, neonatal and perinatal mortality is essentially similar in infants

of teen-age obstetric patients as it is for the newborn of older mothers. Philips and Sivakamasundari in their series found that perinatal mortality was also higher in teen-agers (115 per 1000) but in the present series the perinatal mortality rate was only slightly more in teen-agers than in older patients (501 per 1000 compared to 48.7 per 1000 in control series). The incidence of congenital malformation was similar in teen-aged primigravidae to that in the control group.

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References

1. Aznar, R. and Bennett, E. Am. J. Obstet. Gynec. 81: 934, 1961.
2. Bochner, K.: Am. J. Obstet. Gynec. 83: 269, 1962.
3. Briggs, R.: Am. J. Obstet. Gynec. 84: 436, 1962.
4. Ghosh, N. and Ghosh, B.: J. Obstet. Gynaec. India. 25: 722, 1976.
5. Hacker, E.: Am. J. Obstet. Gynec. 64: 644, 1952.
6. Israel, S. and Wountersz, T.: Am. J. Obstet. Gynec. 85: 659, 1963.
7. Maichetti, A. and Menaker, J.: Am. J. Obstet. Gynec. 59: 934, 1950.
8. Mussio, T.: Am. J. Obstet. Gynec. 84: 442, 1962.
9. Philips, F. S. and Sivakamasundari, S.: J. Obstet. Gynec. India. 28: 576, 1978.
10. Semmens, J. and Mc. Glamory, J.: Obstet. Gynec. 16: 31, 1960.
11. Sen, S. P.: J. Obstet. Gynec. India. 24: 93, 1974.
12. Sinclair, R.: J. Obstet. Gynec. Brit. Emp. 59: 504, 1952.
13. Stern, R.: Lancet. 2: 1083, 1963.