PREGNANCY IN THE UNMARRIED MOTHER

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DURING THE past decade there have been vast changes in our society. Among these changes have been the changing pattern of social morality and the changes that have occurred in our so-called permissive society. About 8 per cent of all births are to women in the teenage group (British Medical Journal, 1965) and 8 per cent also occur in the unmarried mother. The problems that arise are both social and obstetrical. There have been many studies carried out on complications of pregnancy and labour but unfortunately most of these have been based on different age levels, different racial groups and different diagnostic criteria for the pregnancy syndrome. The purpose of this study was to assess all the cases of illegitimate births during 1969 in the Jubilee and Gardner Robb Maternity Hospitals. The study was further extended to include 150 cases of married primigravida during the same period.

Between 1948 and 1955 some 200 girls aged 13–15 years in England and Wales had babies, but over the period 1956-66 the number rose steadily. Though the number of legitimate births increased slightly, and reached a peak increase of 20 per cent in 1964 and has since decreased slightly, the number of mothers in the younger age groups increased and according to the Registrar General’s Classification, there was more than a fivefold increase in mothers aged 15 or less. This is a new social phenomenon. There is an explosion of illegitimate births affecting especially the younger age groups (Russell 1970). Not only is there a dramatic increase in the number of illegitimate births among the young teenagers, but the birth rate among these girls is rising disproportionately.

In the North of Ireland there is a marked increase in the number of illegitimate births in all counties. This increase of illegitimate birth rate also shows an increase in the stillbirth rate and the neonatal mortality rate.

The adequacy of antenatal care was not easy to assess, but it is interesting to note that 20 per cent of unmarried mothers were admitted as emergencies, whereas only 10 per cent of married mothers were admitted for this reason. While 72 per cent of married mothers booked before 28 weeks only 45 per cent of the unmarried mothers booked before 28 weeks.

The majority of unmarried mothers were in the 17-20 age group, whereas the married mothers were mainly in the 21–25 year-old age group.

FACTORS IN PREGNANCY

Pre-eclamptic toxaemia

This has been defined in this study as blood pressure of 140/90 mm of mercury or higher after 20 weeks maturity associated with proteinuria and/or oedema. The overall incidence of pre-eclampsia was 14 per cent which correlates well with the incidence in unmarried mothers. Unclassified toxaemia was found in 15 per cent of the study group with patients who showed hypertension without either proteinuria or oedema. The incidence was only 5 per cent in the married mothers.
group. The age distribution is also interesting in that the married mothers showed the greatest incidence of pre-eclampsia in the 21–25 age group, whereas the unmarried mothers had the greatest incidence in the 17–20 age group. These results were also found by Claman and Bell (1964), Semmens (1965), Lewis and Nash (1967) and Utian (1967). However, all cases of pre-eclampsia were mild and settled well with bed rest and sedation. There was one case of a stillborn baby thought to be due to the pre-eclampsia, but no neonatal deaths or eclampsia.

**Anaemia**

This was the most striking finding in the study. Anaemia was defined as a haemoglobin of less than 10.3 gm. per cent. The incidence of anaemia was in the order of 20 per cent as compared with the overall incidence in the married mothers of 13 per cent. More interesting is the fact that the incidence of anaemia appeared to increase the older the patient. The conclusion drawn was that most married mothers received on the whole better antenatal care. The high incidence of anaemia could possibly be explained by the lack of antenatal care of the unmarried mothers.

**The period of gestation**

Labour began at 36 weeks or earlier in 15 per cent of unmarried mothers. Surgical induction of labour was carried out followed by oxytocin in 40 per cent of the cases, as compared with an incidence of 49 per cent in the control group. The majority of these were for unclassified toxaemia, pre-eclampsia and post-maturity. The prematurity rate in this series was 10 per cent as compared with 2 per cent in the control group, which agrees with the findings of Utian (1967). The average birth weight of the study group was 6 lb 15 oz (3,145g) and of the control group 7 lb 4 oz (3,290g). This was thought to be not statistically significant.

**Weights of the babies/prematurity rate**

As has been found by Hulka and Schaes (1964), Semmens and McGlamory (1960) and Stine et al. (1964) unmarried mothers had a high incidence of premature babies and babies of small birth weight. Apart from the babies weighing less than 5½ lb there appears to be no significant difference in the weights of the babies of unmarried mothers and married mothers.

**Factors in Labour**

**Duration of labour**

Labour in the unmarried patient tends to be shorter than in the married, and as the unmarried patients are in general younger, this suggests a correlation between age, behaviour and the duration of labour.

**Method of delivery**

The spontaneous vaginal delivery rate was 85 per cent in the unmarried mothers as compared to 83 per cent in the married mothers. The caesarean section rate was 3 per cent in the unmarried mother as compared with 6 per cent in the married mother, one caesarean section being for disproportion in the post-mature baby and the other two being for placenta praevia, malpresentation and cephalopelvic disproportion.

No significant difference was found in the two groups with regard to mal-presentation in labour and this has been found in most other studies (Sinclair 1952, Poliakoff 1958). There was one case of relative cephalopelvic disproportion in the
TABLE

Pregnancy in the unmarried mother

|                            | % Unmarried | % Married |
|---------------------------|------------|----------|
| Normal delivery           | 85.7       | 83.0     |
| Caesarean sections        | 3.0        | 6.0      |
| Forceps delivery          | 10.0       | 8.0      |
| Vacuum extraction         | 1.3        | 3.0      |
| Surgical induction        | 40.0       | 46.0     |
| Twins                     | 1.3        | 1.0      |
| Stillbirths/1,000         | 5.3        | 3.0      |
| Unbooked patients         | 20.0       | 10.0     |

study group thought to be due to a positional disproportion, occipito-posterior and a postmature baby.

The indications for anaesthesia, general or local, directly paralleled the indications for operative delivery. There was no substantial difference in the incidence of episiotomy or vaginal and perineal lacerations in the two groups. There were no cervical or third degree perineal lacerations in any of the cases. The incidence of postpartum haemorrhage was high, though not significantly different in both groups, being 5 per cent in the study group and 7 per cent in the control group. The average third stage blood loss was 180 ml. in the study group compared with 200 ml. in the control group.

Behaviour in labour

Although behaviour in labour was a purely subjective assessment done by different midwives, it was classified as "good", "satisfactory" or "bad", and it is interesting to note that the behaviour of unmarried patients was considerably better than that of the married patients. As was stated by Stearn (1963), many of these girls have been taken away from their families and immediate friends and no fear of labour had been instilled into them, and one of the more potent causes of inertia was therefore not experienced. In the present study the definite tendency to conservatism, in view of the high illegitimacy rate, probably accounted for the slightly more prolonged second stage of labour. An interesting feature of behaviour in labour is that it tends to be worse in both the study group and the control group the older the patient.

Social Implications

With the increase in acceptance of premarital sexual relationships between young people, the apparent advantages of the permissive society are seldom portrayed in the personal and family tragedies that may flow from such a relationship. The number of adoptions decided before the patient left the hospital was found to be 30 per cent. Furthermore, about 7 per cent married after the commencement of antenatal care. Of the late bookings it is difficult to assess how many emergency admissions of married mothers were not married at conception. Another interesting feature is that, of the illegitimate births, 20 per cent were of a parity greater than one.
NEONATAL MORTALITY

A striking feature is noted here in that the neonatal mortality rate is higher in the unmarried mother than in the married mother. The neonatal mortality rate is also noted to be higher the later the antenatal booking, but also may well be related to the higher incidence of prematurity.

CONCLUSIONS

Three major obstetrical problems were revealed in this study of pregnancy in the unmarried mother.

1. *Increased incidence of pre-eclampsia.* In the unmarried mothers 14 per cent developed a classifiable pre-eclampsia. Most studies show a slightly higher incidence of pre-eclampsia than in this series. This may perhaps be attributed to the variation in diagnostic criteria in the different institutions. The reason for this high incidence of toxaemia is not apparent (Sinclair 1952; Asnar and Bennett 1961; Stearn 1963; Hasson and Falls 1964).

2. *Increase in prematurity rate.* It has been shown in this study that unmarried mothers have an increased tendency to begin spontaneous labour before term. These findings are in contrast to those of Bochner (1962). Both Bochner and Stearn found that the birth weights were much the same as in the control groups. Birth weight is to some extent reflected in a higher perinatal mortality rate in the unmarried mothers.

3. *Anaemia.* The correlation between unmarried mothers, their age and anaemia was discussed. It is interesting to note that the incidence of anaemia is considerably higher in unmarried mothers as compared to the control group, and, furthermore, the incidence of anaemia increases with increasing age of the mother.

Finally, a further finding was the perinatal and neonatal mortality which was considerably higher in the unmarried mother as compared to the married mother.

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REFERENCES

**BRITISH MEDICAL JOURNAL** (1952). 2, 1384.
CLAMAN, A. D., and BELL, H. M. (1964). *Amer. J. Obstet. Gynec.*, 90, 350.
LEWIS, B. V. and NASH, P. J. (1967). *Brit. med., J.*, 1, 733.
POLIAKOFF, S. R. (1958) *Amer. J. Obstet. Gynec.* 76, 746.
RUSSELL, J. K. (1970). *Practitioner*, 204, 401.
SEMMENS, J. P. (1965). *Obstet. Gynec.,* 26, 77.
STEARN, R. H. (1963). *Lancet,* 2, 1083.
UTIAN, W. H. (1967). *Brit. med. J.,* 1, 733.

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