TEENAGE PREGNANCY: PROBLEMS AND EFFECTIVE MANAGEMENT

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Four out of five pregnancies occurring in girls aged 19 or less are unplanned and therefore not adequately prepared for⁽¹⁾. Factors associated with pregnancy in later life include a good general education, school-based sex education and access to contraceptive services⁽²⁾. Considerable changes in renal and endocrine physiology occur in pregnancy and altered hormone levels may be especially important in girls who are still developing. It has been shown that the greatest improvements in pregnancy outcome (less infant low birth weight {LBW}, reduced perinatal and neonatal mortality) occur when an at-risk or high risk mother receives adequate antenatal care^(3,4). Adolescents have traditionally been considered high risk, and it is presumed that proper antenatal care should improve outcome in this group.

Trends

The United Kingdom has the highest teenage pregnancy rate among 15-19-year-olds in Western Europe⁽²⁾. The current rate of conception among 16-19-year-olds is 56.8/1000 (this is decreasing), while among the under 16 group it is 8.3/1000 (1993) – this figure has remained more or less steady over the years⁽⁵⁾. The target described in the Health of the Nation document is to reduce the rate of conception in this latter group to 4.8/1000 by the year 2000⁽⁶⁾.

The level of adolescent pregnancy varies from a very low rate in the Netherlands (12 pregnancies per 1,000 adolescents per year) to a very high rate in the Russian Federation (more than 100 per 1,000). Japan and most Western European countries have low rates (under 40 per 1,000) while moderate rates (40-69 per 1,000) occur in Australia, Canada, New Zealand and a number of European countries. The United States has pregnancy rates of 70 or more per 1,000⁽⁷⁾.

Adverse outcomes for pregnant teenagers

Many teenage mothers have satisfactory pregnancies without longterm negative outcomes. Compared to women between 20 and 35 years, however, they appear to be at higher risk of problems in the following areas:

- **HEALTH** pregnancy-induced hypertension (PIH)
anaemia
placental abruption
other obstetric complications
depression and isolation
termination of pregnancy
- **EDUCATION** school drop-out
gaps in education
- **SOCIETY** reduced employment opportunities
poor housing
poor nutrition
increased reliance on state welfare.

In addition, about half of pregnancies in under 16-year-olds and one third in 16-19-year-olds end in termination of pregnancy⁽²⁾. These terminations can have adverse effects on the medical and psychosocial health of these girls. Pregnant teenagers who have a miscarriage may also suffer due to inadequate support.

Many studies have been carried out in various countries trying to understand the increased risks that pregnant teenagers run. The findings of these studies are contradictory. It must be noted, however, that patterns of antenatal care and other factors differ between countries.

In 1999, Ambadekar *et al* studied 1,830 pregnant teenagers⁽⁸⁾. They were partly matched with a control group of women who were 20 years and above. The results showed that the incidence of babies with low birth weight was significantly higher in teenagers, but that operative interference was significantly more frequent in the adult pregnancies.

In a retrospective study carried out on 108 girls aged 17 years and under by Nadarajah and Leong, 21.2% of the babies weighed less than 2,500g and only 7.2% achieved vaginal delivery⁽⁹⁾. The most common complications were anaemia and pre-term labour.

However, Plockinger *et al* found no significant differences for frequency of PIH, premature delivery, low birth weight, intrauterine growth restriction, malformations or perinatal mortality at one week in a group of 188 girls aged between 11 and 15 years⁽¹⁰⁾. They were compared with 4,569 women aged between 20 and 24 years.

Berenson *et al* showed in a study of 337 girls that adolescents with unplanned pregnancy were at increased risk of insufficient weight gain⁽¹⁾, while Villaneva *et al* found that the frequency of depression among pregnant adolescents was 39%⁽¹¹⁾.

One third of pregnant adolescents were found by Allard-Hendren to engage in heavy episodic alcohol use⁽¹²⁾. This can result in fetal alcohol syndrome.

PREVENTION OF ADVERSE EFFECTS

If, indeed, pregnant teenagers are at increased risk of adverse effects from their pregnancy, then there must be some benefit in attempting to reduce these risks by taking specific measures. Is there any evidence that any intervention makes a difference? The health and development of pregnant teenagers have been shown by a recent study to benefit from programmes which promote access to antenatal care as well as targeted support by health visitors, social workers and other non-medical care givers.

WHAT IS COMPREHENSIVE CARE?

Comprehensive care programmes are those which, in addition to providing medical care for the duration of the pregnancy (standard antenatal care), also address social and emotional issues that arise as a result of pregnancy. These programmes target lifestyle factors through health education, emphasising a good maternal diet, adequate gestational weight gain, and the need to stop smoking, drinking and drug use during pregnancy.

They may offer:

- counselling
- social services
- home-based parenting support programmes
- nutritional assessment
- antenatal care by medical personnel
- education about pregnancy (eg parentcraft)
- links to other services
- support for continued education.

In a review and meta-analysis of prenatal care and maternal health during adolescent pregnancy carried out by Scholl *et al* less than 50% of teenagers enrolled for antenatal care compared to 70% (white) and 56% (black) of mature women aged 20-24years⁽¹³⁾. In addition, 11% (white) and 15% (black) teenagers either had no antenatal care at all or else booked in the third trimester of their pregnancy.

There was no overall increase in the risk of either PIH (except in the very young, that is <16 years) or anaemia. This is shown in Tables 1 and 2 below.

Author(s)	PIH/total teens	PIH/total adults	relative risk	95% CI
Jorgensen ¹⁴	6/256	32/100	0.07	0.04-0.14
Perkins <i>et al</i> ⁵	30/135	24/100	0.93	0.58-1.48
McAnaney <i>et al</i> ⁶	1/25	4/57	0.57	0.07-4.70
Hardy <i>et al</i> ^{7,a}	13/87	14/71	0.76	0.38-1.51
Hardy <i>et al</i> ^{7,b}	81/744	116/744	0.70	0.54-0.91

^a <15 years ^b <18 years

Table 1 Pregnancy-induced hypertension; comprehensive vs regular care: adolescent controls

Author(s)	Anaemia/total teens	Anaemia/total adults	relative risk	95% CI
Jorgensen ¹⁴	15/256	30/100	0.20	0.12-0.33
Hardy <i>et al</i> ^{7,a}	13/87	8/71	1.33	0.58-3.01
Hardy <i>et al</i> ^{7,b}	149/744	116/744	1.28	1.03-1.60

^a < 15 years ^b <18 years

Table 2 Anaemia: comprehensive vs regular care: adolescent controls

However, although there was no overall increase in the risk of a caesarean section, there was less risk in those having comprehensive care compared with regular antenatal care. This is shown in Table 3.

They also found an increase in the risk of preterm

Author(s)	CD/ total teens	CD/ total adults	relative risk	95% CI
Jorgensen ¹⁴	37/256	25/100	0.58	0.37-0.91
Perkins <i>et al</i> ⁵	5/135	6/100	0.62	0.20-1.95
Smith <i>et al</i> ⁸	4/100	15/100	0.27	0.10-0.71
Neeson <i>et al</i> ⁹	24/261	47/318	0.62	0.39-0.98
Hardy <i>et al</i> ⁷	16/87	8/71	1.63	0.75-3.55
Kay <i>et al</i> ²⁰	28/180	25/180	1.12	0.68-1.84

Table 3 Caesarean delivery (CD); comprehensive vs regular care: adolescent controls

Author(s)	preterm/total teens	preterm/total adults	relative risk	95% CI
Perkins <i>et al</i> ⁵	15/135	19/100	0.59	0.32-1.09
McAnaney <i>et al</i> ⁶	0/25	3/57	0.76	0.08-6.96
Hardy <i>et al</i> ^{7,a}	7/87	16/71	0.36	0.16-0.79
Hardy <i>et al</i> ^{7,b}	139/744	160/744	0.87	0.71-1.06
Kay <i>et al</i> ²⁰	17/180	18/180	0.94	0.50-1.77

^a nulliparas ^b multiparas

Table 4 Preterm delivery: comprehensive vs regular care: adolescent controls

delivery (relative risk 1.46), but the risk decreased with comprehensive care.

In summary, the study showed that comprehensive care reduced the risk of PIH, preterm delivery and caesarean section in teenage pregnancies. Also, teenagers enrolled in the comprehensive care programmes were less likely to experience a repeat pregnancy within two years.

WHAT IS AVAILABLE LOCALLY?

There are specialised parentcraft classes for pregnant teenagers in most regions. In the Lancaster area, the midwife who organises parentcraft sessions will also run specialised sessions for teenagers who are interested. There does not, however, seem to be much knowledge (and therefore usage) of this service at the moment. The classes, as well as providing information about issues surrounding pregnancy and childbirth, also provide a forum for concerns and anxieties to be discussed.

CONCLUSION

Specialised antenatal care programmes for pregnant adolescents are likely to improve outcome as shown in a recent meta-analysis. The reduction in preterm labour (and subsequent reduction in low birth weight and caesarean section) is likely to improve health as well as reduce the cost of health care. Comprehensive care should involve medical personnel, health visitors, social workers and other care givers.

For adolescents who receive no antenatal care at all, the risk of adverse effects are of course greater than for those who receive some antenatal care even if it is not comprehensive care. One can only hope that with more education and dissemination of information about pregnancy in general, fewer and fewer teenagers will turn up in the delivery suite not having had any antenatal care at all.

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