

Smoking in pregnancy — what does my patient know?



Department of Obstetrics and Gynaecology, Stellenbosch University, Tygerberg, W Cape

J E Viljoen, MB ChB

H J Odendaal, MB ChB, FCOG (CMSA), MMed (O&G), FRCOG, MD

A recent study by the Medical Research Council (MRC) Perinatal Mortality Research Unit at Tygerberg Hospital found that 39% of pregnant women smoked cigarettes.¹ Smoking in pregnancy is clearly recognised in the literature as an important, dose-related, preventable risk factor for poor perinatal outcome.² A previous MRC finding that 47% of South African coloured women smoke during pregnancy³ stands in sharp contrast to the prevalence in developed countries, for example 15.8% in the USA.⁴ In a developing country, where poverty in itself increases perinatal mortality and morbidity, this increase in cigarette smoking may have further negative effects on perinatal outcome, despite efforts to optimise antenatal care.

It is, therefore, of concern that despite current knowledge of the harmful effects of smoking in pregnancy, such a large percentage of pregnant women at Tygerberg Hospital are smokers. We wondered to what extent pregnant patients at Tygerberg Hospital are aware of the harmful effects of cigarette smoking during pregnancy and after childbirth.

What was done

The study group consisted of 200 pregnant coloured women attending the high-risk antenatal clinic (HRC) at Tygerberg Hospital. Most of these mothers have had previous pregnancy complications or losses, or suffered from a medical condition that could complicate the pregnancy. For some patients, the HRC served as a secondary clinic because they lived close to the hospital.

Information was gathered over a period of 3 weeks in March 2000 by means of a self-completed questionnaire, which was handed out in the HRC waiting area.

Smokers were asked about their smoking habits and whether they considered altering these habits during pregnancy. Knowledge of smokers was tested with regard to the effects of active maternal smoking and environmental tobacco smoke (ETS) on pregnancy and infants. An enquiry was made into breast-feeding

intentions and willingness to expose infants to active maternal smoking. Non-smokers were asked about previous smoking habits, the smoke-free interval, motivation for quitting, and whether they considered resuming smoking after the delivery. There were further questions to non-smokers regarding their knowledge of the effects of active maternal smoking and ETS on pregnancy. An enquiry was made into exposure of non-smokers to ETS.

What was found

Of the 200 respondents, only 57.5% did not smoke and 42.5% smoked. With regard to awareness of the effects of smoking in pregnancy, 8.2% of smokers thought it was harmless and 11.8% indicated knowledge of nonspecific effects. Most smokers (77.6%) knew about one or more of the following specific dangers: disturbed growth parameters (62%), respiratory risk (45%) and a threat to general health (23%). The remaining 2.4% of smokers left the question unanswered.

Sixty-seven per cent of the non-smokers had never smoked previously. Of the 33% of ex-smokers, 34.2% had stopped smoking on falling pregnant, while 60.5%

Table I. Specific knowledge of effects of active smoking in pregnancy (%)

Specific knowledge	Smokers	Non-smokers
Health risk	23	25
Respiratory risk	45	45
Neurological side-effects	12	5
Abnormal development	13	4
Pregnancy loss	10	7
Preterm labour	12	4
Disturbed growth parameters	62	39
Cancer	9	4
Future problems	3	6
Cardiovascular risk	0	6
Maternal disease (e.g. respiratory)	7	0

Table II. Smoking cessation intervention for pregnant patients

Consultation scheme

1. Ask	Enquiring about smoking status
2. Advise	Provide strong advice to quit, with personalised messages on benefits of quitting and the impact of smoking on the woman and fetus
3. Assess	Assess the willingness of the patient to quit within the next 30 days
4. Assist	Suggest and encourage problem-solving methods Provide social support Arrange social support Provide pregnancy-specific, self-help smoking cessation materials
5. Arrange	Assess status in follow-up visits, encourage cessation if still smoking

had quit before falling pregnant. The remaining 5.3% of ex-smokers left the question unanswered. Only 20% of non-smokers were not exposed to ETS. The specific knowledge of smokers and non-smokers is shown in Table I.

Recommendations

In the quest for optimal perinatal outcome it is essential to convey current scientific knowledge to the target group of pregnant mothers. This could be achieved effectively at clinic or hospital visits and antenatal consultations. Awareness should be raised by means of pamphlets and posters explaining the dangers of smoking in pregnancy, using layman's terms and illustrations. These could be made freely available in waiting areas and consultation rooms.

On a personal level, the patient should be addressed in a non-judgemental manner, taking into account her psychosocial situation, e.g. social pressures, and the presence of spouse, partner or family members who smoke. The aim should be to enlighten the patient and her family and friends regarding the importance of smoking cessation in pregnancy.

An effective way to persuade smokers to quit in pregnancy during a 5 - 15-minute consultation (Table II) has recently been suggested.⁵

1. Odendaal HJ, Van Schie DL, De Jeu RM. Adverse effects of cigarette smoking on preterm labour and abruptio placentae. *Int J Gynaecol Obstet* 2001; **74**: 287-288.
2. Castles A, Adams EA, Melvin CL, Kelsch C, Boulton ML. Effects of smoking in pregnancy. *Am J Prev Med* 1999; **16**: 208-215.
3. Steyn K, Yach D, Stander I, Fourie JM. Smoking in urban pregnant women in South Africa. *S Afr Med J* 1997; **87**: 460-463.
4. Lambers DS, Clarke KE. The maternal and fetal physiological effects of nicotine. *Semin Perinatal* 1996; **20**: 115-127.
5. Authors unnamed. ACOG educational bulletin. Smoking cessation during pregnancy. *Int J Gynaecol Obstet* 2001; **75**: 345-348.