

Ageing motherhood: private grief and public health concern



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Over the past decades the number of babies born to women in their late 30s in industrialised countries has progressively increased. There are a number of social and personal concerns involved in the decision of a woman to become a parent relatively late in her reproductive life, including the pursuit of educational and career goals.¹ The difficulty in weighing risks and benefits to individuals makes counselling women difficult, especially as the available evidence of attendant risks is still evolving. Currently, three types of pregnant older women are seen for antenatal care: those who conceive spontaneously, those who still have fertilisable oocytes for assisted conception, and those conceiving with assisted reproduction after egg donation. Pregnancy in older women is associated with many confounding factors (for example parity, pre-existing diabetes and hypertension), which should be taken into account if the risks associated with advanced maternal age are to be quantified.^{2,3} The adverse effect of increasing age is a continuum rather than a threshold effect.

Demographic shift

In the Western world, pregnancies in women older than 35 are increasing markedly.⁴ Fig. 1 shows the trends in England and Wales, whereby the numbers of women having children over the age of 30 for the first time has outnumbered women under 30. In the USA the birth rate for women aged 40 - 44 years, although much lower than the rate for women aged 15 - 39 years, has increased by 56% between 1980 and 1993.⁵ By 2001 in the USA, birth rates for women aged 35 - 39, 40 - 44 and 45 - 49 rose by 30%, 47% and 190% respectively compared with figures in 1990.⁶

Difficulties in getting and staying pregnant

Fertility decreases with advancing maternal age and various forms of early pregnancy loss are common.⁷ A woman's ability to conceive declines steadily, and age-related fertility problems increase after 35 years of age: 34 - 46% of women aged 35 years or older are

unable to become pregnant.⁸ Older women would have had more opportunity to acquire gynaecological diseases, such as pelvic infections or endometriosis, or to have experienced premature menopause. Body mass index increases with age and adversely affects fertility and management.⁹ There is a greater risk of spontaneous miscarriage, although the magnitude of this risk is confounded by factors of gravidity, birth order and reduced fecundicity. Fig. 2 shows

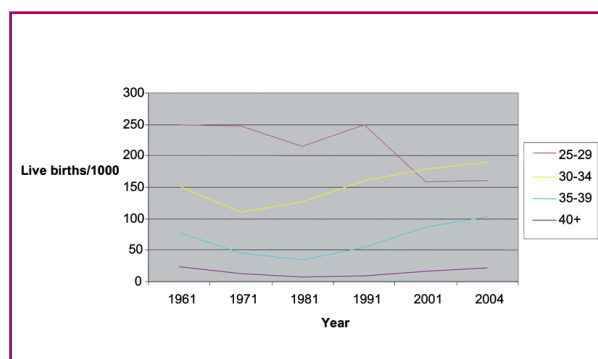


Fig. 1. Maternal age groups at childbirth in England and Wales, 1961-2004 (Office of National Statistics).

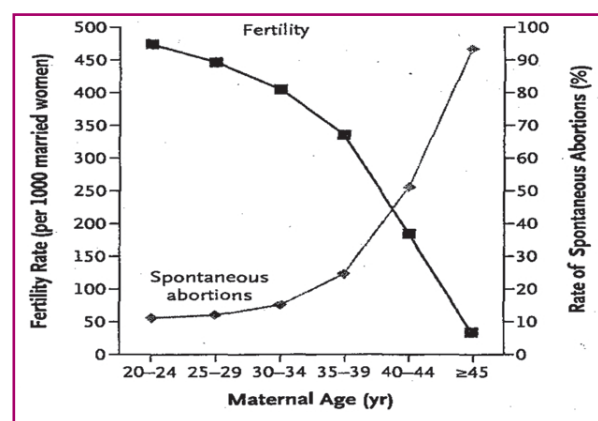


Fig. 2. Fertility and miscarriage rates as a function of maternal age. This shows the effect of maternal age on the average rate of pregnancy calculated on the basis of 10 different populations living between the 17th and 20th centuries that did not use contraceptives. Miscarriage is defined as spontaneous pregnancy loss before the 20th week of gestation. (From Heffner,⁴ reproduced with permission.)

starkly the fall in fertility with age and the rise in spontaneous miscarriage. Chromosomal abnormalities, especially trisomies 13, 18 and 21 and sex chromosome aneuploidies, increase exponentially with maternal age. This rise starts from the early 30s, and amniocentesis data show a level of 1.4% at the age of 35 years, 1.9% at 40 and 8.9% at 45.⁸

Maternal complications

There is a higher incidence of haemorrhage from placenta praevia and abruption of the placenta.^{8,10} Hypertension, pre-eclampsic toxemia and diabetes are not only more common (Fig. 3) but also seem to carry an even greater risk for older women, resulting more frequently in fetal death.⁸ There are more problems with abnormal labour patterns and a definite higher risk of caesarean section.¹¹⁻¹³ A possible reason for the latter is that the obstetrician may have a lower threshold for intervention in older women. An alternative explanation is that myometrial function deteriorates with age.¹³ This mechanism may also explain the known increased risks of breech presentation^{10,14} and postpartum haemorrhage.¹⁴

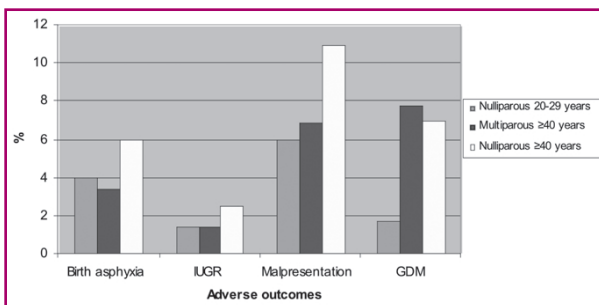


Fig. 3. Adverse outcomes associated with advanced maternal age and parity. (Adapted from Gilbert et al.³)

Maternal mortality also increases several fold for older women compared with the younger pregnant patient.⁸ This increased risk is regardless of parity, time of entry into prenatal care and level of education. In an American study, among white women the risk ratio of death compared with under 35-year-olds was in the range 1.8 - 2.7 for those aged 35 - 39 years and 2.5 - 7.9 for those aged 40 years and older. The risks were higher among black women: the risk ratio of death ranged from 2.0 to 4.1 for the age group 35 - 39 years and from 4.3 to 7.6 for the age group 40 and older.¹⁵

Fetal complications

Older women have an increased incidence of preterm delivery and are more likely to deliver under 32 weeks' gestation with a consequent increased risk of prenatal mortality.¹⁴ There is also an increased risk of low birth weight¹⁶ and admission to the special care unit.¹⁷ Although initially this appears confusing, older women seem to have both more babies weighing

under 2 500 g and more weighing over 4 000 g.⁸ The increased likelihood of older women delivering a small for gestational age baby may be related to poorer placental perfusion or transplacental flux of nutrients.¹⁸ The increased likelihood of older women delivering a large for gestational age baby is thought likely to be due to a difference in fetal environment in older pregnant women due to age-related change in maternal metabolism.¹⁴ The Pedersen hypothesis suggests that the increased influx of nutrients across the placenta could cause fetal hyperinsulinaemia and accelerated fetal growth.^{19,20} The stillbirth rate doubles by late 30s and increases 3 - 4-fold by the mid-40s.⁸ There is 4-fold increase of risk of fetal death in women with previous infertility.²¹ In a prospective cohort study during a 15-year period in Sweden, perinatal mortality was 0.5%, 1.0% and 1.4% in women aged 20 - 29 years, 40 - 44 years and over 45 years, respectively.²²

Benefits

It is generally considered that older parents tend to be more mature, and it is assumed that they will be in a stable, healthy marriage and with more financial and family resources to assist with the process of child rearing.^{23,24} Although some complications may occur more frequently in older mothers as a result of accumulated prior disease, there is no direct evidence that older age *per se* complicates either gestation or parturition.⁶ If the trend to older motherhood is led by the better off and more educated (as it has been), the real adverse effects may be attenuated and the benefits overplayed. For example, older age has an advantage of better perinatal outcome of twins and triplets,⁶ although multiple pregnancies, which can have very serious complications, are themselves associated with age (spontaneous and assisted conceptions). In addition, women aged over 35 years are more likely to breastfeed than younger women.¹⁴ However, unless studies use multiple logistic regression analysis to exclude bias from the confounding factors of social class and education in particular, it is difficult to work out if these are real benefits due to ageing or not (i.e. these may be the same women who would have breastfed had they been younger). There is a theoretical benefit in waiting if outcomes are rapidly improving over time (e.g. between being 20 years old in 2000 and being 40 in 2020), but this is not the case when incremental improvements are small.

Medical response

As obstetricians and gynaecologists, we see both the benefits and risks of the demographic changes in our daily practice. Globally, more women still suffer from the consequences of unfettered fertility than from problems associated with taking contraception throughout their most fertile reproductive years. We need to campaign about the issues that underpin women's

basic human rights, particularly relating to obstetrics and gynaecology – such as access to education, contraception, safe abortion and safe childbearing. On the other hand, doctors are starting to witness greater numbers and new types of personal suffering that the shift of childbearing out of the ‘normal’ range brings, particularly infertility, miscarriage and pregnancy complications (with and without IVF). Just as with the obesity epidemic, doctors cannot be neutral about a social change that brings disease and public health complications with it. Older pregnant women must not be vilified or made anxious, as most of them will be fine with good outcomes. But young women nowadays need to get consistent messages about the facts of reproduction. They are ill served by the mixed media messages given by ‘success’ stories of older celebrity mothers, particularly over 45, which do not tell the full truth about egg donation, multiple pregnancies and serious complications. Sadly, the basic underlying facts of reproduction have not changed. Despite earlier menarche and longer lifespan there has been no change whatsoever in the age of menopause, and biology relentlessly ignores women’s social gains. Women (and men) deserve consistent and uncontroversial advice from their doctors if they ask for it:

- There is no ‘right’ time to have a baby
- The birth of a baby is a joy at any age
- The most secure age for childbearing remains 20 - 35 years
- Risks begin to accelerate after the age of 35 and become considerably greater after 40 years
- The advent of assisted reproduction helps a small minority of women who can afford it, but diminishingly so at age over 35.

If a society wishes to help men and women make ‘healthy’ choices and avoid the problems and costs (personal and economic) of age-related female infertility and pregnancy complications, it must regard the demographic shift of childbearing as a public health concern, not merely a matter for the private domain. Young people need good information. We must consider the social policies and cultural mores that inhibit or support younger families, such as the role of the extended family, the provision of child care, and tax and employment incentives.

Conclusion

The overall balance of the literature supports the finding that women and their children experience increased problems at a maternal age beyond 35 years. Couples need to know and understand what risks they are running and are willing to accept against the presumed advantages of deferred parenthood.

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