

International Federation of Fertility Societies

Global Standards of Infertility Care

Standard 14

Infertility management in the older couple

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Introduction

The goal of IFFS Practice Standards is to provide policy and decision-makers and the clinical and scientific community with a set of recommendations that can be used as a basis for developing or revising institutional or national guidelines on selected practice recommendations for infertility practice.

The document addresses minimal standards of practice but does not provide rigid guidelines but rather gives recommendations that provide the basis for rationalizing the provision of infertility services in view of the most up-to-date information available.

Because country situations and programme environments vary so greatly, it is inappropriate to set firm international guidelines on infertility practice. However, it is expected that institutional and national programmes will use these guidance documents for updating or developing their own infertility guidelines in the light of their national health policies, needs, priorities and resources. The intent is to help improve access to, quality of, and safety of infertility and assisted conception services. These improvements must be made within the context of users' informed choice and medical safety. Adaptation is not always an easy task and is best done by those well-acquainted with prevailing health conditions, behaviours, and cultures.

Rationale

The increasing availability of cost effective treatments for infertility has extended this management to couples at the upper end of the reproductive age span. The use of donor eggs has also increased significantly in recent years not only for couples in whom the female partner has experienced premature ovarian failure but also for those in whom the female partner has reached natural cessation of ovarian function. This wider scope now gives rise to increasing numbers of pregnancies in women over 45 who would not otherwise conceive. Whilst increased paternal age also has

implications the primary consideration in these couples is for the safety of the female partner and the potential risks for the child.

Scope of this guidance

This guidance covers all infertility treatments in couples in whom the female partner is greater than 45 years at the time of treatment. Reference will be made to increased paternal age. It is accepted that the female age of 45 is somewhat arbitrary and practitioners should consider individual circumstances when considering this guidance.

Evidence for this guidance

Age at first pregnancy and the incidence of pregnancy in older women are both increasing. Between 1991 and 2001 in the United States the percentage of first births in women aged 40-44 increased by 70%.^{1,2}

Evidence for increased maternal risk and poor fetal outcome has been reported by several authors. Up to ten fold incidence in pregnancy induced hypertension and five fold incidence in gestational diabetes has been reported^{3,4} Furthermore there is a significantly increased likelihood of premature delivery⁵, small for gestational age and late fetal loss in older women^{6,7,8}. All studies have shown a substantially increased rate of operative delivery⁹. Women in their sixth decade are at increased risk of cardiac events¹⁰ and whilst there is no evidence to recommend pre-pregnancy training there is evidence that aerobic conditioning in pregnancy improves cardio-respiratory tolerance in pregnancy¹¹

Paternal age has also increased significantly with a rise from 25% to 40% in the 35-54 year old group between 1993 and 2003 reported.¹² Increased paternal age has been associated with increased risk of congenital abnormality in the offspring^{13,14} although the effect appears to be small. There has also been an association with increased paternal age and later development of mental health problems¹⁵.

Recommendations for Practice

Assessment of the female partner

1. The older female partner should be carefully assessed for general medical problems *prior* to consideration of infertility treatment. This assessment should include blood pressure measurement, blood chemistry for renal function, assessment for diabetes and thyroid function.
2. Women in their sixth decade planning pregnancy should undergo a thorough cardiovascular assessment including consideration of Cardiopulmonary Exercise Testing. Women who do not normally participate in regular aerobic exercise should be recommended to begin an exercise regime in order to improve aerobic fitness before Embarking on pregnancy as it is known that cardiac workload increases by 40% during pregnancy.

3. Women in this age group should also be advised of the increased likelihood of complications in pregnancy which may be serious and rarely life threatening. In addition, they should be advised of the high likelihood of operative delivery and its associated risks.
4. Older women are more likely to have gynaecological abnormalities such as fibroids and ovarian cysts. This should be taken account of during assessment of the female partner.
5. Women in their sixth decade should ensure participation in screening programmes for common cancers such as cervix, breast and bowel when these exist because of the possible impact of pregnancy on previously undiagnosed cancer.
6. Women who are menopausal prior to commencement of infertility treatment should be prescribed hormone replacement therapy for a period of time prior to treatment to improve endometrial and uterine health provided there are no contraindications.

Assessment of the male partner

1. The male partner should be advised and assessed in the normal way for fertility assessment. Advice should be given in respect of smoking, alcohol, general health and wellbeing.
2. Couples in whom the male partner is over 50 years of age should be advised that there is a slightly increased risk of an abnormal baby due to the age of the paternal genome.

Considerations for the child resulting from treatment

1. The patient should be advised of an increased possibility of conceiving a child with a chromosomal abnormality when treatment is undertaken with the patient's own eggs
2. Treatment in this group of patients is associated with increased risks to the child both in-utero and neonatal and result in poorer outcome with increased likelihood of preterm delivery, long term morbidity and cerebral palsy. The couple should be advised of these risks.
3. Multiple pregnancy increases both maternal and neonatal risk in the older women. Strategies to reduce the likelihood of multiple pregnancy are recommended. This is particularly so in women receiving treatment with donor eggs.

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