Fertility After 35 : Need for Contraception

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Abstrak

Pada wanita umur di atas 35 tahun, kemungkinan terjadinya kehamilan menurun dengan cepat dan semua metode kontrasepsi menjadi lebih efektif. Kehamilan tidak diharapkan lagi. Setiap kegagalan kontrasepsi harus dicegah karena mereka banyak yang bekerja di luar rumah dan tengah mengembangkan karir. Pilihan pertama adalah sterilisasi, selanjutnya dapat pula dipakai kontrasepsi jangka panjang yang reversibel seperti IUD, implan dan suntikan. Pil KB merupakan kontrasepsi yang paling disukai sebelum umur 35 tahun. Setelah umur 35 tahun pilihan beralih ke suntikan, implan, IUD dan sterilisasi. Sebenarnya pil KB dapat dipakai dengan aman sampai usia menopause, karena itu para petugas KB seyogyanya merubah kebiasaan mereka menghentikan pemakaian pil KB pada wanita umur 35 tahun. Hendaknya dipertimbangkan mudarat dan manfaatnya. Seperti halnya metode KB yang lain, metode "barrier" lebih efektif pada wanita di atas 35 tahun. Salah satu keuntungan metode pemakaian "barrier" adalah menurunya risiko terjangkitnya penyakit menular seksual. Kesimpulan : pemakaian kontrasepsi dengan sistim kafetaria berlaku juga bagi wanita umur di atas 35 tahun.

Abstract

In women over 35 years old, the chance of conception rapidly declines and all contraceptive methods become more effective. No more pregnancies are expected. Any failure should be avoided because many women take on outside work and have been developing their own careers. The sterilization is the first recommended method, followed by the long term temporary methods i.e. IUD, implant and injectable. The pill is the most popular contraceptive method especially before the age of 35. Then there is a switch to injectable, implant, IUD and sterilization. In fact the pill may be used safely until menopause, therefore the family planning workers should change their habit of advising women to stop taking the pill at 35 years. They must reconsider the balance of risks and benefits. As with other methods the barrier methods in women over 35 are more effective. They offer many advantages which include a profound reduction risk of STDs. In conclusion the cafetaria-system should also be applied to women over 35.

Keywords : *Contraception, fertility after 35*

After the age of 35 years, the ovary begins to decrease in weight and size and contains fewer primordial follicles and more atretic follicles. This is associated with an increase in circulating FSH and a decrease in estradiol and progesterone, while LH concentration is not significantly changed. These changes in circulating hormone levels frequently occur in the face of ovulatory menstruation. It is possible that such changes result from decreased production of inhibin with the decreasing number of follicles. Moreover, the decreased production of estradiol removes the negative feedback on FSH production. The increased FSH induces rapid follicular development and this may be the cause of shortening of the cycles which may be the first clinical evidence of perimenopause. As the number of follicles are further reduced estrogen production continues to decline until it becomes insufficient to induce the LH surge necessary for ovulation. It is well documented that anovulatory cycles increase with age. The frequently unopposed estrogen results in increased incidence of dysfunctional uterine bleeding and endometrial hyperplasia.[1,2,3,4]

The oocytes released by women approaching the menopause have poorer quality and are less readily fertilizable. This may be because they have been held in the metaphase of then first maturation division for over 40 years. This undoubtedly contributes to reduced fertility after the age of 35 which has been confirmed by the observed sharp reduction in success rates of various methods of assisted reproduction in women above this age. This was clearly shown in a study of nulliparous women undergoing artificial insemination the probability of success was 74 percent under 30 years but dropped to 54 percent above the age of 35.[2,5,6,7]

For elderly sexually active women not wanting to conceive, the probability of pregnancy remains unacceptably high. Grey reported that 50% of women over

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40 are still potentially fertile, the annual risk of pregnancy is approximately 10% for women 40-44, and 2-3% for women 45-49, and the risk may not be zero over the age of 50. It has been estimated that in women over 45 who had been amenorrheic for a one year period the probability of subsequent menstruation (which could be ovulatory) was 10%. These data emphasize the need for contraception up till menopause.[1,6,7]

Pregnancy after 35

In developing countries, many women above the age of 35 have already completed their family size, while in developed countries, many women take on outside work and have been developing their own careers. No more pregnancies are expected by them. Pregnancy in this group of women is usually an unwelcome occurence which carries special risks. Unwanted pregnancy above the age of 35 (even more 45) involves increased risks to both mother and fetus.[8]

There is a very sharp increase in the maternal mortality rate; four times as high in the fifth decade as compared with the third. Spontaneous abortion rates double between the same two decades, reaching 26 percent in the 40 to 49 years age group. Perinatal mortality rates double as maternal age doubles. These rates determined in developed countries, are expected to be much higher in developing countries where the problems of high parity and poor maternity care are superadded.[1,8]

The risk of chromosomal anomalies in the fetus increases with age. The tests for prenatal diagnosis are not available to women in the developing countries. Even when available, they may pose moral, ethical and personal dilemmas for the parents. Frequently the couple choose to have abortion induction rather than testing for the probability of having an abnormal fetus. The statistics from the Office of Population Censuses and Surveys in the United Kingdom show a legal abortion rate above the age of 40 reaching 45 percent of the pregnancy rate, very much higher than the rate for all ages and out of proportion to the real risk of fetal anomalies. This implies an emotional trauma for the parents that could have been avoided by using reliable contraception.[1,8,9,10,11,12]

CONTRACEPTIVE CHOICES

All kinds of contraceptive method may be used by women after 35. They are more effective in this particular group of women.[9,11]

Sterilization[9-12]

Tubectomy and vasectomy have become one of the most popular contraceptive methods. Considerable changes in the method of tubectomy have largely accounted for this increase in popularity, the introduction of laparoscopy being the major innovation. Tubal occlusion by laparotomy is still practised in a number of centres, but is associated with a longer stay in hospital and increased morbidity. Laparoscopic methods, usually performed as a day-case under local or general anaesthesia, include bipolar tubal electrocoagulation, the application of Silastic bands (Falope rings) or occlusive clips (Hulka Clemens, or Filshie).

Initial worries that menstrual disorders may be induced have not been supported by recent studies. Lu and Chun proposed a mechanism for increased menstrual loss folowing tubal ligation. They suggested that there was interruption of the utero-ovarian circulation due to occlusion of the terminal branches of the uterine arteries. It has been proposed that this is more likely with tubal division than with occlusion by clips or rings, and that this is the explanation for improved results with laparoscopic methods. However, Alderman conducted a prospective trial of patients undergoing Pomeroy-type tubal ligation and failed to show any increase in menstrual loss.

Electrocoagulation similarly would be expected to destroy utero ovarian circulation, yet a comparative study of this method with occlusive Silastic rings or spring-loaded clips failed to show any significant difference in menstrual loss. Vasectomy is safe, easy, and effective, carried out under local anaesthetic, as an outpatient procedure.

Hormonal Contraception

Implantable[13-17]

The only implantable contraceptive system available for introduction into the family planning program is Norplant Implant. It has been approved for contraceptive use in many countries including Finland, Sweden, Indonesia, Thailand, Ecuador, the Dominican Republic and Colombia. Other Implantable contraceptives which may be available to family planning programs within this decade are Implant-2, Fused-pellets, Capsules releasing ST-1435, implanon and implant.

The Norplant Implant system consists of six capsules, each containing 36 mg of levonorgestrel and having a

diameter of 2.4 mm and a length of 3.4 cm. The six capsules appear to release levonorgestrel at a rate of approximately 80 mcg per 24 hours during the first 6-18 months of use. This rate declines over the next few months and thereafter the capsules deliver approximately 30 mcg of levonorgestrel per 24 hours. This latter rate of release is maintained for at least 5 years. Norplant Implant is manufactured by Leiras Pharmaceuticals, Huhtamaki Oy, Turku, Finland.

Inserting and removing Norplant are minor surgical procedures that require local anesthetic and small incision. Removal is more difficult and takes longer time than insertion. If providers are adequately trained and maintain sterile conditions, however complications are unlikely to occur with either procedure.

Irregular menstrual bleeding is the most common side effect of Norplant. If women expect this and know it is not harmful, many are willing to accept it.

Injectable[18-20]

Depot medroxiprogesterone acetate (DMPA) and noretisterone enanthate (NET-EN), two long acting injectables, which are highly effective and reversible contraceptive methods. DMPA is approved for use as a contraceptive in more than 90 countries; NET-EN in more than 40. DMPA is given in a 12-week or 3-month dose of 150 mg. NET-EN is recommended for administration using 200 mg at either 8-week intervals or every 8-week, for the first four injections and then every 12-weeks.

The most promising once-a-month injectable contraceptives at present are Cyclofem (MPA 25 mg + EC 5 mg) and Mesigyna (NET-EN 50 mg + EV 5 mg). Both preparations are highly effective and compare favourably with the efficacy of the 3-monthly injectable. One major advantage of these two once-a-month injectables is much better cycle control than with the 3-monthly injectable.

Many women find injectables to be a highly satisfactory contraceptive method. In family planning programs where women are offered a choice among methods that includes injectables, generally between one quarter and two quarters choose injectables. The mode of administration partly explains this popularity. In many developing countries people like injectables medications because they have proved so effective againts disease. In Indonesia and Thailand, for example respect for injections dates back to injections of penicillin in the successful yaws eradication campaign of the 1950s and to the countinuing effective use of other injectable antibiotics.

Injectables also are popular because they are easy to use. Many women prefer a single injection every several months to taking a pill or charting basal body temperature every day. The injection is not related to the timing of coitus, and women do not have to buy or store supplies. Injectables can be discontinued after one or three months simply by not having another injection, whereas an IUD or nonbiodegradable implants must be removed by a trained health worker.

Also, injectables are administered outside the home. A woman can maintain her privacy, and if necessary, she can use an injectable without the knowledge of her husband or family. Like combined estrogen-progestin OCs, injectables are highly effective in preventing pregnancy. Unlike OC users, however, women using progestin only injectables do not experience the minor side effects associated with estrogen, such as nausea.

Progestin-only pill (Mini pill)[9-11]

The minipill consists of a small dose of progestin - 0,5 mg or less. It is taken daily, even during menstruation. This preparation has been associated with the older for many years. Unfortunately, the fact that it is a hormone in pill form has lead many practitioners to believe that the contraindications to its use are similar too, if not the same as, those for the combined preparations. However, the mini pill has very few side-effects and its efficiency as a contraceptive has been shown to be as good in this age group as that for the combined pill among women in their twenties. It has several disadvantages. It must be taken on a regular basis with a leeway of no more than 3 hours beyond a fixed time each day. The preparation relies mainly upon its effect on cervical mucus, which it renders hostile to sperm. However, it commonly has a more direct effect on the hypothalamo-pituitary ovarian axis, leading to irregular menses and intermenstrual bleeding.

Combined pill[9,11,12,21]

The combined oral contraceptive has three antifertility actions, the most important of which is the suppression of ovulation. Both the estrogen and the progestogen components of the pill act on the hypothalamus, affecting the physiological negative feedback mechanism, to suppress the production of follicle stimulating hormone and luteinizing hormone.

During the normal menstrual cycle, the cervical mucus becomes penetrable to spermatozoa at the time of the

preovulatory estrogen surge, when the mucus is thin and stretchy and has increased "Spinnbarkheit". By preventing the estrogen surge, the pill prevents this change in the mucus, and the progestogen component of the pill keeps the mucus scanty and vicous, with low Spinnbarkheit. This type of mucus impairs sperm transport.

The endometrium during the normal cycle undergoes a closely synchronized series of changes, in preparation for the moment of implantation. The exact significance of these changes is still not fully understood, but it is clear that the combined oral contraceptive disrupts endometrial development and leads to the formation of a thin endometrium with poorly developed secretory ability.

Many clinicians have avoided prescribing oral contraceptives for women over age 35 because of the perceived idea that their use is associated with an increased incidence of cardiovascular disease. That perception has been reinforced by existing oral contraceptive labeling. However, the major out of scientists are in agreement that there really is no reason to stop low-dose oral contraception in nonsmoking, healthy women despite the lack of epidemiologic data on a large number of women taking low-dose pills.

The rationale for avoiding oral contraceptives in the older, reproductive-age woman was based on a model that used data from the higher-dose pills, essentially the data from the 1970s and not from the 80s. If the dosage of estrogen is kept at the lowest level, at which the hypercoagulable state is minimized, the chance of a venous event, classically thromboembolism, is virtually elimated. For women who are over 35, progestins are not the main concern. The failure of recent studies, such as the Nurses Health Study, to detect any lingering risk of cardiovascular disease or to link risk with duration of use in former pill users leads us to believe that circulatory death in oral contraceptive users is predominantly from thrombosis. In the premenopausal patients one is far better advised to give low-dose oral contraceptives than standard estrogen replacement.

IUD[9,11,22]

The IUD would appear, at face value, to be the most attractive of the non-hormonal reversible methods of contraception. Apart from the initial fitting, no motivation is required, although users should be encouraged to check the presence of the device by feeling for the strings after each period. Pregnancy rates, expulsions, perforations, and infection are all lower in the older-woman. Removal for bleeding or pain remains constant throughout the age groups studies by Tietze and Lewit. This suggests good counselling, because prior to insertion a major consideration is the woman's pre-existing menstrual cycle. Menorrhagia and prolonged bleeding (i.e. in excess of 7 days) are obvious contraindications. Uterine myomata are more common in the older woman, but when encoaching on the uterine cavity (submucous) are likely to lead to menstrual problems. If the menstrual pattern is normal, but bimanual examination indicates the presence of fibroids, careful sounding of the uterus to exclude deformities of the cavity is essential prior to the insertion of a device.

The risk of infection in the woman over 35 years is lower than for younger age groups, even when fitted in the nulliparous woman. This may signify a marked reduction in multiple-partner sexual exposure in the older woman. Intermenstrual or postcoital bleeding in a patient with an IUD may be acceptable, if only occasional, in the younger woman, but for any woman over the age of 35 with similar symptoms, gynaecological investigation is essential. This must include cervical cytology (Papanicolaou smear) and some form of endometrial biopsy after removal of the device.

Choice of type of IUD for the older woman should be the same as for younger age groups. Plastic inert devices which tend to be larger than the copper-bearing devices are still can be used. Because of declining fertility in the fourth decade, copper-bearing devices may be left in situ for considerably longer than officially approved.

Much interest has been shown in a new generation of T-shaped devices containing levonorgestrel or 3-keto-desogestrel in the main limb. Initial studies in Western Europe suggest that there is a lower pregnancy rate and fewer menstrual problems. The progestin affects the cervical mucus, rendering it hostile to sperm, and possibly also helps to prevent ascending infections. For the woman over 35 of ages, anovulatory cycles become more common and there may be associated hyperplastic changes of the endometrium. These should be prevented by such a device, and in theory, it may protect againts endometrial carcinoma. Hormone replacement therapy could then be given during these troublesome years, combining all the advantages of such treatment with excellent contraception (and without the need for systemic progestogen).

Further research along these lines is needed. Intermenstrual bleeding has been reported and the appropriate action, as outlined above for other IUDs, must be taken.

Barrier methods[9-11]

Although barrier methods still remain the most popular method of contraception throughout the world, doctors are often loath to recommend them to their patients because of the supposed low effectiveness rates. In fact, pregnancy rates in the older woman fall dramatically, particularly because of reasons already stated such as declining fertility and coital frequency, but also because of more proficient use. The Oxford/Family Planning Association study looked at two age groups of women whose partners had used the condom for 4 years or more. The failure rate in women over 35 years was 0.7 per 100 couple-years compared to 3.6 in the younger age group (25- 34 years).

Barrier contraception offers many advantages to couples, particularly a profound reduction in risk of sexually transmitted diseases, and possible protection against the development of abnormal cervical cytology and carcinoma of the cervix. Condoms in recent years have been lubricated with spermicide, but it is still good practice to recommend that a vaginal spermicide be used in conjunction with the condom, particularly at mid-cycle. The method is remarkably free of side-effects; but the use of condoms may lead to or exacerbate psychosexual problems, especially erectile impotence, particularly in the older age group. For this small group the condom is obviously contraindicated. Rarely, allergies may develop to the latex, and non-allrgic sheaths are available.

CONCLUSION

Declining fertility and reduced coital rates increased the effectivenes of all contraceptive methods in women over 35 years old. However in choosing the method one should consider the balance of risks and benefits.

Recent clinical epidemiology and clinical pharmacology studies have indicated the safety of extending the use of combined oral contraceptives (COC) beyond the age of 35 years and up to menopause.

Women who have reasons for avoiding estrogens, like smoking hypertension, diabetes and history of CVDs, can use progestin- only contraceptives like pills, injectables and implants. The latters, particularly Norplant have the merits of high efficacy, similar to that of sterilization, the almost immediate termination of menstrual irregularities upon removal and the the long-term effect.

Increasing the number of contraceptive options available to reproductive-age women, including women over 35, will improve proper counselling and enhance compliance.

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