

Contraception: New developments

There is no ideal method of contraception and every method has its own side effects. Different groups of patients require different contraception - adolescents, older women, post-birth, post-abortion and those patients with concurrent medical problems.

There are three ways to prevent pregnancy: abstinence, contraception, or abortion. The higher the availability and acceptability of contraception, the lower the abortion rate. Abortion can be legal and illegal, safe and unsafe and there are complications even when done in the hospital, i.e. haemorrhage, sepsis, later infertility and death. Abortions should be safe, legal and rare.

In the older pregnant woman (>40) natal and peri-natal mortality is higher. We assume these patients are less fertile and they have a lower coital frequency but their social life is changing and very often older women are still sexually active. Career women frequently choose to delay their first or second pregnancies. Concerning contraception, age is not a significant risk factor, but smoking is. If an older woman doesn't smoke she may use any method. However if the woman is a smoker she must discontinue the combined oral contraceptive at the age of 35. For those women in their mid to late forties hormone replacement therapy (oestrogen) plus the mini-pill (progesterone) is a good method of contraception.

The adolescent is now more sexually active than previously, commencing sexual activity at a younger age and having more sexual partners. Three contributing factors are an earlier maturity, sexual liberation and widely available contraception. Parents have a responsibility to impart education at an earlier age. A study undertaken in the United Kingdom of a few thousand children between 13 and 16 years revealed that 50% of them were already sexually active. How can parents help teenagers to deal with increasing sexuality? One good option is the "say no" programme which is popular in America and in Europe. The more liberal approach is to advise avoidance of sexually-related risks, i.e. pregnancy, sexually transmitted diseases and HIV. Interestingly, pregnancy rates are lowest in the Netherlands and Scandinavian countries where there is a liberal attitude toward teenage sexuality.

I Contraception for adolescents

1. Oral contraception

Oral contraception such as the combined pill is good and effective, provided the patient is well motivated and takes her pills daily. Frequently, acne improves on the pill and this improves self-esteem.

2. Intra-uterine device

The intra-uterine device is not advisable for adolescents.

3. Norplant

Norplant is a hormonal implant that provides good contraception (see below).

4. The dual method

The dual or "double Dutch" method was started in the Netherlands. It refers to any contraception method plus a barrier method (even post-vasectomy). The barrier is advised in order to reduce the risk of HIV infection.

5. Emergency contraception

Emergency contraception can be used in the form of two Ovral tablets taken within 72 hours of unprotected coitus, followed by another two Ovral tablets exactly 12 hours later. Unfortunately this excellent method of emergency contraception is severely under-used by doctors and health providers.

An alternative regime is Nordette four tablets and another four tablets 12 hours later or Triphasil (yellow tablets). An

IUCD can be inserted within 5 days.

The WHO has stated clearly that the only contra-indication for emergency contraception is the pregnant woman. RU486 is a pill available in Europe and is an effective abortive agent. However, it has not been marketed and is not currently available due to political and ethical problems.

II Newer methods

1. Persona

Persona is small glucometer-like gadget that measures oestrogen and LH levels in the urine. This enables the woman to determine if ovulation is occurring. Unprotected sex should be avoided if the test is positive. Should she have intercourse, a barrier method should be used or emergency contraception afterwards. Persona has the ability to facilitate timing of intercourse for couples with infertility or those planning a pregnancy.

2. IUD - new developments

i) IUD insertion

The current trend for IUD insertion is to prescribe an antibiotic at the time of insertion as this results in a lower occurrence of pelvic inflammatory disease.

ii) Copper coated string

A unique IUD is a copper-coated string that hooks on to the fundus. No expulsion occurs and it can be used in adolescents. This is an excellent method that will be registered in South Africa within two years. This product is already widely used in Europe, Asia, the United Kingdom and Scandinavian countries.

iii) Progesterone IUD - Intra Uterine Hormonal System (IUHS) Mirena

This is a new development and is probably the most significant advance in reversible contraception since the development of the oral contraceptive. This device contains levonorgestrel which is released from a cylinder in minute doses of 20 micrograms per day into the uterine cavity. This device can be left in the uterus for five years. It is an effective contraceptive and has the added benefit of reducing menstrual blood flow by up to 90% and alleviates dysmenorrhea.

On removal of the intra uterine hormonal system the endometrium returns to normal and within 30 days menstruation returns.

Mirena has a further advantage in that as progesterone is present one can add oestrogen orally or as a patch for the peri-menopausal woman. One now not only has reliable contraception but hormone replacement therapy as well. This product is soon to be released in South Africa.

3. Norplant

Norplant is a progesterone (desonorgestrol) that is implanted under the skin. It is easily inserted and removed and provides contraception for five years. Initially, there was adverse media reporting as a result of scarring and sepsis, but this arose due to the fact that Norplant was inserted too deeply. The side effects are similar to Depo preparations, namely breakthrough bleeding, but the occurrence is much less than the Depo preparation. Following removal, fertility returns immediately. Family planning experts have stated that this method should be used for adolescents, because it provides excellent contraception for five years.

III. Contraception for the next decade

We urgently need something that will help us with HIV and STD, since we do not have a good preventive method.

1. The Vaginal Ring

The vaginal ring is unlikely to be registered in this country, as the user must be highly motivated and educated. This ring, which contains oestrogen and progesterone, is inserted into the vagina.

Indications and contra indications are the same as for oral contraception. The ring is left in the vagina for three weeks after which it is removed for one week to allow a normal period. The ring can be removed prior to intercourse if so desired and inserted afterwards. This does not affect the ring's efficacy.

2. *Immune contraception - a vaccine*

This method of contraception is long-awaited. Much work on immune contraception is being carried out in Canada, USA and Scandinavia. However, there is some unhappiness about this method because it is considered, by some, to be immoral and unethical.

3. *Anti-progestine - RU 486*

This can be used once a week as a contraceptive. Trials have just been completed in Cape Town and Singapore. Its use as a regular contraceptive is controversial.

4. *The patch-combined*

This patch is placed on the abdominal wall, not the buttock. The indications and contra indications are the same as for oral contraception. The patch is worn for three weeks followed by one week patch-free. Trials are commencing in Durban and other centres in South Africa.

5. *Oral contraception - combined pills*

The third-generation pill contains the lowest dose of oestrogen plus the new progesterone, gestodene. These pills are considered the gold standard. They contain 30 micrograms of oestrogen and 75 micrograms of gestodene. Gestodene is the most potent progesterone that we have, which has resulted in the extremely low doses. These are monophasic pills, but triphasic pills are also available and always have slightly higher doses.

Why are these pills so good?

These pills have excellent cycle control with almost no side effects. In 1995 the Committee of Safety in Medicine issued a letter to every doctor in the United Kingdom stating that the new generation of pills is more risky because of the increase in thrombosis. This received prominent media attention and within one day millions of women in the United Kingdom stopped oral contraception. What happened? Within a few months the abortion rate increased, pregnancy increased and the use of emergency contraception increased.

Doctors and staff were changing patients to the newer generation of pill without taking into account the medical history of the patient and ascertaining whether or not there was a risk factor that would place the patient at greater risk. In other words, the newer generation pill was being prescribed to those patients who had more risk factors. If a patient is not happy with any contraception and she keeps complaining, despite having been changed from one to another type of oral contraceptive, it means something is wrong with the patient. It is probably a dangerous woman, not dangerous pills!

The history is vital. There are numerous risk factors for thrombo-embolism - obesity, pregnancy, trauma, surgery, malignancy and immobilisation - meaning a patient confined to a wheelchair. These patients should not be prescribed combined pills. Fatal embolism is extremely rare. Be careful in prescribing combined pills to patients with thrombocytosis. WHO and all the population councils state very clearly that it is not necessary to screen every patient haematologically prior to prescribing oral contraception.

Embolism is extremely rare, especially for a young patient.

6. *Contraception in the peri-menopausal patient*

Hormone replacement therapy and mini pills work well together. The mini pill must be taken every day, preferably at the same time. For such a patient it is best that the mini pill is taken in the evening as efficiency is at a maximum after a few hours. However, if the mini pill is prescribed in a younger patient or adolescent, advise the patient to take the mini pill in the morning as the adolescent is usually sexually active during the day.

IV. Oral contraception problems

1. *Amenorrhoea*

Patients are usually very satisfied with oral contraception. If amenorrhoea does occur with patients using oral contraception, change to another group of pills, e.g. from triphasic to monophasic or vice versa. This usually helps, although the reason why is not known, but is probably due to endometrial atrophy.

2. *Spotting*

Patients who complain of spotting, brown discharge or irregular bleeding are usually smokers. Cigarettes are now considered an ovarian toxin. Triphasic pills usually cause more bleeding problems than monophasic pills. If there is cycle irregularity, change to monophasic pills. If this is not successful, change to a group containing a higher dose. Such an example would be Ovral. Place the patient on such a preparation for six months to regulate the period and then change back to the normal oral contraception.

What are the causes of breakthrough bleeding?

First of all is poor compliance. If she forgets one pill all will be fine. However, if three or four consecutive pills are forgotten, she will experience breakthrough bleeding. Other causes include the use of laxatives, diarrhoea and too stringent a diet. Smokers have higher occurrence of breakthrough bleeding on any pills.

3. *Rest period*

Patients frequently request to stop taking the oral contraceptive so as to take a rest. This is not necessary as oral contraception can be taken continuously from menarche to menopause.

4. *Delaying the period*

Postponing the period is easily done by skipping the placebo tablets. In Europe it is commonly done - the placebo tablets of a monophasic pill are skipped for two months, resulting in a period every three months.

If one wishes to postpone a period only for a while and the patient is already on triphasic pills, one adds the same colour of the pill that she is currently taking and the period can be postponed for about a week to ten days.

5. *Drug interactions*

i) *Anticonvulsants*

Contraception does not work well with anticonvulsants. If an epileptic patient demands oral contraception, she should be given higher doses - 50 microgram works very well. If breakthrough bleeding occurs an additional 20 microgram pill can be added.

ii) *Antibiotics*

If the course is short, use barrier methods or avoid intercourse, as the patient is not safe for 7-10 days. The patient on long term antibiotics, such as those used in the treatment of acne, is safe on any oral contraception. For an acne patient, the first choice is Diane 35. Marvelon and Triphasil also works well in treating acne.

6. *Benefits of oral contraception*

These are well known and include regulation of the cycle, minimising dysmenorrhoea, reducing pre-menstrual tension, reducing acne, reducing the risk of osteoporosis as well as the prevention of ovarian and endometrial cancer.

V. ... and what of tomorrow?

The reality of tomorrow is different. For the next century, for the next ten years, what is changing? Diabetes is increasing, prostate cancer is epidemic and the aged population is increasing. Elderly patients are much more costly for the state than the young population, even with the problem of education. Breast cancer, which is not preventable, is a major problem in first-world countries. Even the risk factor is difficult to define. In a third-world situation, the number one problem is cervical cancer followed by breast cancer. All this is a reality of tomorrow.

This is the challenge for the next 10 years. The aim for the next century is the universal search for human dignity. ●