UNIT 26 HORMONAL CONTRACEPTION

Structure

26.0 OBJECTIVES

After reading this unit, you will be able to:

- list the various methods of hormonal contraception;
- describe the mode of action, advantages and disadvantages of above methods;
- select the client and provide the chosen method;
- schedule follow up visits and provide follow up services;
- treat side effects/change to other methods if required; and
- select appropriate method for special circumstances.

26.1 INTRODUCTION

One of the widely used methods of contraception is hormonal and the synthetic version of two female sex hormones i.e. oestrogen and progesterone. Hormones can be provided through many routes, the most common being oral pills. The selection of clients, advantages and disadvantages, mode of action, side effects and their management and providing various methods of hormonal contraception are discussed in this unit.

26.2 METHODS OF HORMONAL CONTRACEPTION

Contraception is provided by synthetic version of two female sex hormones — oestrogen and progesterone. Hormonal contraception includes:

- Oral Contraceptive Pills
- Implants
- Injectables
- Others — Progestasert and Vaginal Rings

26.2.1 Oral Contraceptive Pills (OCPs)

In oral pills, the doses of the hormones have been progressively decreased over the last 20 years to the very minimum needed to prevent pregnancy. Hence many side effects have been reduced. Oral pills are of two types:

1) Combined Oral Contraceptive Pills (COC): These pills contain combination of both hormones oestrogen and progestogen.

2) Progestin only pill (Minipill): Pills contain progestogen only.

The birth control pill (COC or OCP) is an effective reversible method of contraception and has been used for the last 30 years. It is extensively used in developed countries and is a suitable method for developing countries too.

1) **Combined Oral Contraceptive Pills (COC)**

The COCs have been part of the National Family Welfare Programme since early 1960. In spite of safety and high efficacy, the percentage of currently married women using 'the pill' is low. The National Family Health Survey (NFHS) II (1998- 99) showed that only 2.1% of currently married women, aged 15-45 years, is using 'the pill'. The rumours and myths about 'the pill' and the side effects of 'the pill' are reported to be the two major reasons for such low usage. To promote the sustained use of the COC, it is important to counsel clients to clarify rumours and to provide reassurance/treatment in case of side effects. Selection of clients is another important factor in ensuring sustained use of the method. Considering the advantages of the method, it is important to improve the quality of care to increase the acceptability and continuation of the method especially when the felt need for spacing among the younger age group is increasing (NFHS II).

A) ***Pharmacology of Combined Oral Contraceptive***

Based on the results of several clinical trials conducted in India and elsewhere, the National Family Welfare Programme introduced the low dose COC in the eighties. The COC used in the National Family Welfare Programme contains:

- Norgestrel 0.30 mg per tablet
- Ethinyl Estradiol 0.03 mg per tablet

The COCs used in the National Family Welfare Programme are available under two brand names — Mala N under the free distribution scheme and Mala D under the social marketing programme (at a subsidised price). These are monophasic combination pills containing the same amount of oestrogen and progestogen in each pill. Each packet of Mala N and Mala D contains 21 contraceptive pills and 7 iron tablets. Other types of COCs are commercially available.

Mechanism of Action

COCs provide effective protection against pregnancy by:

i) Inhibition of ovulation by suppressing Follicular Stimulating Hormone (FSH), thus suppressing the release of ovum from ovaries

ii) Preventing implantation by altering endometrium so that it is not conducive for implantation

iii) Reducing transportation of sperms by making cervical mucus thick.

- Continuous taking of the COC for 7 days is critical for suppressing the ovulation.
- Each tablet's effect lasts only for 48 hours.

Effectiveness

It is very effective when taken correctly and consistently and the failure rate is 0.2 - 1 per 100 women years.

Advantages of COC

a) *Contraceptive Benefits*

i) Very effective when taken correctly and consistently and protects against both uterine and ectopic pregnancy.

ii) Safe for most women

iii) Easy to use

iv) Reversible (can stop the COC whenever desired by the client on her own and immediate return of fertility is experienced)

v) Non-invasive

vi) Unrelated to sexual activity

b) *Health Benefits*

i) Menstrual cycle

- Decreases menstrual blood loss and the duration
- Decreases menstrual cramps and pre-menstrual tension as cycles are anovulatory due to suppression of ovulation
- Eliminates mid-cycle ovulation pain as no ovulation
- Ensures regular 28 day menstrual cycle

ii) Does not worsen anaemia due to less menstrual blood loss

iii) Reduces incidence of severe Pelvic Inflammatory Disease (PID) as compared to nonusers. The mechanisms contributing to less severity of PID in women who are COC users are the following: Decreased chances of growth of micro-organisms due to decreased menstrual blood, reduced chances of the organisms entering the uterus through thickening of cervical mucus and reduced chances of spread due to less stronger uterine contractions.

Although the COC reduces the chances of severe PID, it does not offer protection against all types of PID such as that caused by Chlamydia.

iv) Protection from ovarian and endometrial cancers and functional ovarian cysts

v) Protection from benign breast tumours such as fibroadenoma and fibrocystic disease

vi) Used in treatment of endometriosis and abnormal bleeding

vii) Relief from acne especially pre-menstrual type due to the oestrogen

viii) Decreases incidence of rhuematoid arthritis

Disadvantages

a) *Limitations*

i) Has to be taken every day and depends on the motivation of the user

ii) Does not protect against Sexually Transmitted Diseases (STDs)/ HIV/AIDS

iii) Not appropriate for mothers who are breast feeding infants less than six months old

iv) Effectiveness of the COC may be decreased in women who are taking the following drugs:

- Anti epileptic drugs
- Anti tuberculosis drugs
- Antibacterial drugs
- Anti fungal drugs

It also interferes with the effectiveness of certain drugs. The list of drugs that affect the effectiveness of COC and those affected by the COC are given in Annexure 1.

b) *Side Effects*

i) Minor side effects listed below are most common during the first three months of use of COC and these usually disappear with continued use.

- Amenorrhoea
- Inter-menstrual bleeding or spotting (breakthrough bleeding)
- Nausea
- Headache
- High blood pressure
- Weight gain
- Breast tenderness

Minor side effects are most common in the first three months of COC use. These disappear with continued use of the COC.

ii) Serious side effects such as heart attack or stroke are rare with low dose COCs. However, the risk is high among women who smoke, particularly those above 35 years, Women who smoke, irrespective of whether they use COC are at increased risk for the above complications.

B) ***Method-specific Counselling for COC***

Once a client has chosen COCs for family planning, then method specific counselling is done as follows. Counselling is done every time a client comes for re-supply. Ensure that privacy and confidentiality are maintained all the time.

i) Establish rapport with the client.

ii) Ask the client what she knows about COC, rumours (if any) and past experience with COC (in case of clients who have used ‘the pill’). (Refer to Annexure 2 for common rumours).

iii) Provide information as relevant and clarify doubts. If the client is new, repeat the information on the following. Show a packet of COC.

- Mechanism of action
- Advantages, disadvantages
- Effectiveness
- When to start taking the COC (in relation to menstrual period)
- The importance of taking the COC everyday and what to do if the pill is missed

iv) If the client is still convinced about the decision to use COC, conduct an assessment of the client for medical eligibility as detailed below. Record history and findings in the client record.

v) If found eligible, demonstrate the use of the COC as mentioned in guidelines below. Ask the client to repeat instructions. Record the supply of the COC.

vi) Tell the client about likely problems /side effects in the first few months and what to do in such situations.

vii) Tell the client about likely serious problems (warning signs) when the client must contact the Medical Officer /health worker and assure that care will be provided.

viii) Tell the client to use condoms (by spouse/partner) if the COC is missed, in case of severe vomiting or diarrhoea and if there is any chance of exposure to STDs and demonstrate how to use condoms. Ask the client to repeat the instructions.

ix) Tell the client to inform the health provider if started on treatment for tuberculosis or epilepsy.

x) Tell the client to inform the health provider about taking COC when seeking medical consultation.

xi) Tell the client how to store the COC.

xii) Tell the client to return for follow up in a month's time and to bring the used packet of COC.

xiii) Provide three packets of COC. Tell the client about other sources of COC, which she can use if needed.

xiv) Provide a packet of condoms for use in conditions listed above (see viii).

Counselling on Return Visit

Every time a client comes for follow-up, it is important to counsel the client to ensure continuation of the method.

i) Ask the client whether she and her spouse/partner are satisfied with the method

ii) Ask about problems and reassure as required.

iii) Ask about any history of pelvic pain or discharge per vagina or any history suggestive of STDs in the spouse/partner

iv) Assess the client by history and examination to confirm problems or for any new conditions that are contra-indications for use of COC. Record findings.

v) Manage problems as discussed later in this Section.

vi) If the client has developed conditions that are contra-indications for COC use, counsel for other methods of family planning.

vii) If the client is still eligible for continuing with COC, ask to repeat how to take the COC.

viii) Repeat reasons for contacting the health worker and when to return for follow up.

ix) Provide supplies of COC and record the same.

Counselling a Client Who Wants to Stop Using the COC

It is important to counsel a client who wants to stop using the COC because of request by the client or because of contra-indications/complications. It is important to tell clients about immediate return of fertility after stopping the COC.

i) If the client wants another child, tell about immediate return of fertility. Provide information on antenatal care, care during delivery and about post-partum family planning.

ii) If the client is stopping the COC due to side effects, which have persisted in spite of management of the problem, counsel for other methods of family planning.

iii) If the client is stopping the COC because of dissatisfaction with the method, counsel (repeat benefits, side effects and their duration). If still not convinced, counsel about other methods of family planning.

iv) If the client develops conditions that are contra-indications for use of COC, counsel about other methods of family planning.

v) Record findings, reasons for stopping the use of COC and advice.

C) ***Client Selection***

Eligibility Criteria for Use of COC

a) *Indications*

Appropriate for:

i) Any woman in the reproductive age group, who desires a highly effective contraceptive

ii) Immediately after abortions

iii) Women with menstrual problems such as severe cramps, heavy bleeding or has irregular cycles

COC decrease cramps, bleeding and regularises cycles.

iv) Has moderate to severe anaemia

Less menstrual blood loss occurs with COC and, therefore, it does not worsen the anaemia.

v) History of functional ovarian cysts and family history of ovarian cancer COC provides protective effect against the above conditions.

b) *Precautions*

Absolute Contraindications

COC should not be prescribed in the following conditions/ situations:

i) Pregnancy

ii) History of thromboembolic disorders in the present or past:

- Deep vein thrombosis
- Stroke
- Oestrogen promotes blood clotting and adds to the existing predisposition to thrombosis.

iii) History of heart disease

- Ischaemic heart disease
- Heart problems such as angina, cardiac failure, valvular heart disease and others
- The increased risk of thrombosis with the oestrogen adds to the predisposition to thrombosis in the above conditions.

iv) High blood pressure 160 mm of Hg^+/100 mm of Hg^+

Oestrogen increases the blood pressure slightly and thus adds to the existing risk situation.

v) Severe headache or migraine with focal neurological symptoms

This may be an indication of increased risk of stroke, a condition in which the COC is contraindicated.

vi) Long standing diabetes or diabetes with vascular disorders such as retinopathy, nephropathy or neuropathy

The COC adds to the increased risk of cardiovascular disease and thrombosis.

vii) Is above 35 and is a heavy smoker (15 cigarettes/'bidis' a day)

Smoking as such is a risk factor for cardiovascular problems and oestrogen adds to the risk. Smoking and oestrogen promote blood clotting.

viii) Has a known carcinoma of breast or has history suggestive of carcinoma or undiagnosed lump

The risk for progress of the condition may be increased. In case of an undiagnosed lump, indication for use is based on confirmed diagnosis.

ix) Has severe or active liver disease, gall bladder disease or history of jaundice in the previous six months or recurrent jaundice during pregnancy

The COC is metabolised in the liver and its use may adversely affect women whose liver function is already compromised. COC may affect the prognosis of the existing liver tumours. It may worsen the existing gall bladder disease.

x) Breast feeding less than six weeks postpartum

Oestrogen increases the risk of thrombosis (adds to the existing risk of thrombosis during early post-partum period). There is also the risk of neonates getting a dose of oestrogen through breast milk.

xi) Known carcinoma of the cervix or history suggestive of carcinoma (unexplained vaginal bleeding: intermenstrual or post-coital)

There is minimal chance of carcinoma in situ progressing to invasive disease and the progression of existing carcinoma. The risk is increased with smoking and unsafe sexual practices.

Relative Contraindications

COC should be considered more carefully in the following conditions:

i) Breast feeding six weeks to six months post-partum

COC may decrease quantity of breast milk.

ii) Age over 40 years

Risk of cardiovascular disease increases and COC may add to the risk.

iii) Smoker and age above 35 years

iv) History of hypertension or current blood pressure above 140/90 mm of Hg

It is advisable to consult a specialist before starting the COC in the following conditions.

v) Known hyperlipidemia

Oestrogen may add to the existing risk.

vi) Unexplained vaginal bleeding

It may be due to pregnancy (tubal or uterine) or pelvic pathology such as malignancy, ovarian cysts, PID or fibroids. COC has a protective effect in case of ovarian cysts, endometrial and ovarian cancers. It is important to diagnose the cause before prescribing COC.

vii) On treatment for tuberculosis or epilepsy or on antibiotics for more than a week

These drugs reduce the efficacy of COC.

i) Planned surgery: COC should be discontinued at least four weeks in advance of the surgery because of its effect on increasing coagulation of blood.

ii) Adolescents who have not reached menarche

Client Assessment

a) *History taking*

History should be taken very carefully. The history should include the following:

- Age, smoker (if smoker: number of cigarettes per day)
- Date of last menstrual period and details of menstrual cycle
- Parity, date of last child birth/abortion
- Whether breast feeding (if breast feeding, age of the child and whether breast feeding is exclusive or partial)
- History of hypertension, heart problems, breathlessness, deep vein thrombosis (severe pain and swelling in the calf) and stroke
- History of severe headaches
- History of jaundice (including during pregnancy) and liver disease
- History of lumps in the breast or breast cancer
- History of cancer of the cervix and uterus
- Any bleeding between periods or after intercourse
- History of pelvic infections or sexually transmitted diseases (abnormal vaginal discharge, lower abdominal pain)
- Whether on treatment for tuberculosis or convulsions or taking antibiotics for long

b) *General and Systemic Examination*

General physical: Weight, pallor, jaundice, cyanosis, pulse, blood pressure.

Heart: Rate

Breast: Lumps, ulcer (see Annexure 3 for breast examination)

Abdomen: Liver (whether enlarged, tender), any mass, tenderness in the lower abdomen

c) *Pelvic Examination*

Conduct the following examinations:

i) Examination of external genitalia for evidence of Reproductive Tract Infections (RTIs)/ STDs

ii) Speculum examination for evidence of vaginal and cervical infection, and cervical growth/ulcers

iii) Bimanual examination for determining the uterine size, consistency, mobility, tenderness and adenexal mass (ovarian cyst/cancer) and for ruling out PID

Laboratory Examination

It is advisable to get the haemoglobin and urine for sugar checked.

Do a Pap smear if possible and a vaginal smear for infections if indicated.

If any contraindication present, do not provide COC.

D) ***Guidelines for Instruction and Follow Up***

Guidelines for Instructing a Client on Use of COC

i) Show the packet of COC to the client as instructions are being given.

ii) Explain the timing of starting 'the pill'.

Start 'the pill' on the fifth day of menstruation (explain that the first day of menstruation is the day when bleeding/spotting starts). Explain that it is important to start 'the pill' on day five as by then menstrual flow will be full and one can be sure of not being pregnant.

iii) It can also be on day 1 of MTP/abortion, 6 weeks post partum if breastfeeding and 6 months after delivery for breastfeeding mothers.

iv) Explain how to take 'the pill'

- Show the client where to start 'the pill' (where it is marked START) and to follow the arrow to decide which pill to take next and follow the arrow till the last pill.
- Show how to take out the pill from the packet.
- Emphasise the importance of taking 'the pill' everyday even during menstruation and even when there is no sexual intercourse.
- Explain that 'the pill' must be taken at a fixed time, preferably at night before going to sleep. This will help to prevent the feeling of nausea, which is common in the early months of taking the pill.
- Tell that the day after the packet is over, the next packet should be started with 'the pill' where it is marked START.
- Explain that 'the pill' has to be taken continuously for 7 days for it to be effective in preventing pregnancy.

v) Explain that the client may suffer from spotting or bleeding between periods and nausea during the first three months. Tell the client that taking 'the pill' at night helps to avoid nausea. Emphasise that the problems usually disappear after the first three months.

vi) Tell the client what to do in case 'the pill' is missed. Emphasise that each day of missing 'the pill' increases the risk of pregnancy

- If one pill is missed, take it as soon as you remember it.
- The next pill should be taken at the same time as usual (two pills may have to be taken on one day).
- If the pill is missed for two days or more:
  - — Take the pills as soon as possible and continue with the packet. Two tablets should be taken for the number of days the pill has been missed. (Although the pill is not effective if missed for 48 hours (2 days). the continuation of the pill is being advised to maintain the routine.)
  - — Use condoms for 7 days, till the pill has been taken for 7 continuous days (for the pill to be effective).

vii) Advise use of condoms:

- If 'the pill' is missed for two or more days
- If the packet of COC is finished and she has no new packet
- If risk of exposure to STDs
- In case of diarrhoea or vomiting when the chances of absorption of the pill are less and the risk of pregnancy is increased

viii) Instruct the client to inform about the use of 'the pill' during every medical consultation to prevent prescription of drugs that have interactions with the COC.

ix) Advise the client to contact for advice if started on treatment for tuberculosis, epilepsy or on long term antibiotics as these drugs decrease the effectiveness of the COC.

x) Advise to keep the COC in a cool, dry place, away from the reach of children.

xi) Give instructions for follow up.

- Return to the clinic within three months of starting the COC. Advise to bring the used packets (even the empty ones to be sure that the pills are being taken regularly).
- Return to the clinic before the scheduled date if:
- not satisfied with the method
- develops jaundice
- pregnancy suspected
- at risk of STD/HIV
- develops lumps in the breast
- has inter-menstrual or post-coital bleeding

xii) Contact immediately if any of the following as they are life threatening conditions:

- Severe abdominal pain (probably gall bladder disease, blood clot or pancreatitis)
- Severe chest pain, cough, breathlessness (probably blood clot in the lungs or heart attack)
- Severe headache, dizziness, weakness, numbness (probably due to stroke, hypertension or migraine)
- Eye problems (loss of vision or blurring), speech problem (probably due to stroke or temporary vascular problem)
- Severe pain in calf or thigh (probably blood clot in the leg)

xiii) Provide a packet of condoms. Demonstrate the use of condoms if the client does not know and ask to repeat the same.

Warning signs

The following acronym will help to remember the warning signs.

A—Abdominal pain

C—Chest pain

H—Headache

E—Eye problem

S—Severe leg pain

Follow up Schedule

During each follow up visit the client should be counselled.

The Medical Officer should instruct the HW(F) that during her routine field visits she should enquire about any problems and advise clients for follow-up.

The recommended schedule for follow-up assessment is as follows:

- First visit - Within three months of prescribing the COC
- Subsequent visits - Yearly

Do a complete assessment during the yearly visits. Record findings.

Do haemoglobin and urine for sugar.

The client must be instructed about taking 'the pill' regularly.

Management of Side Effects and Other Complications

Always counsel clients who have side effects and other complications. If the COC is stopped, counsel for other methods of family planning.

a) *Amenorrhoea*

i) Ask the client to explain how she has been taking 'the pill' (see the used packet if available, to be sure that no pill has been missed).

ii) Ask for history of diarrhoea and vomiting, whether started on treatment for tuberculosis, epilepsy or any antibiotics.

iii) Rule out pregnancy by history and examination.

- If pregnant and does not want to continue with the pregnancy, refer for Medical Termination of Pregnancy (MTP).
- If pregnant and wants to continue with the pregnancy, reassure that 'the pills' taken so far won't affect the foetus. Advise about antenatal care.

iv) If 'the pill' is being taken regularly and if the client is not pregnant, reassure the client. Explain that no menses is due to lack of build up of the uterine lining.

- If the client is reassured, advise to complete the second packet of 'the pill' and report for follow up.
- If the amenorrhoea continues after the second packet is over, refer to a specialist.

b) *Spotting or bleeding between periods*

i) Ask the client to explain how she has been taking 'the pill' (see the used packet if the client has brought it).

ii) Ask for history of diarrhoea and vomiting, whether started on treatment for tuberculosis, epilepsy or any antibiotics.

iii) Rule out pregnancy and other gynaecological problems such as tumours, PID or cervical infection by history and examination.

iv) If pregnant, advise according to intentions of continuing with the pregnancy (see iii under Amenorrhoea as mentioned above).

- If evidence of infection, take smears and treat.
- Take pap smear if possible and send it to an appropriate facility for diagnosis and refer to a specialist if required.

v) If 'the pill' is being taken regularly and she is not pregnant, reassure the client.

- If the client is reassured, advise to complete the second packet and report for follow up.
- If the spotting persists even after the second cycle, refer to a specialist.

c) *Nausea*

i) Ask the client to explain how she has been taking 'the pill' (see the used packet if the client has brought it).

ii) Find out the timing of taking 'the pill'.

iii) Rule out pregnancy by history and examination.

If pregnant, advise according to intentions of continuing with the pregnancy (see iii under Amenorhhoea).

iv) If not pregnant, rule out other causes of vomiting such as jaundice.

v) If 'the pills' are not taken at night, advise to do so.

vi) If the client wants to continue with 'the pill', reassure and explain that the symptoms generally disappear after three months.

vii) If on high dose oestrogen or progestogen, prescribe low dose pills.

d) *Headaches*

i) Rule out causes of headache such as sinusitis and eye problems. Treat accordingly and continue with the COC.

ii) Check blood pressure. If blood pressure is high. manage as described under High Blood Pressure.

iii) Rule out migraine. Ask for history of blurring of vision, numbness and speech problems. If history suggestive of migraine, stop the COC and counsel for other methods of family planning.

e) *High Blood Pressure*

i) Ask for history of high blood pressure prior to starting 'the pill'.

ii) If blood pressure is higher than 160/100, stop the COC. Advise for treatment (if not already on treatment). Counsel for another method of family planning.

iii) If between 140/90 and 160/100, counsel about the potential danger, of rise in blood pressure due to the pill. If wants to continue with the pill, advise to get blood pressure checked every month and to get treatment for high blood pressure (if not already on treatment). Put on a low dose pill (if on high dose pill).

f) *Weight Gain*

i) Check whether the weight gain is after the COC has been started.

ii) Find out about eating habits.

iii) If no reason for weight gain, rule out pregnancy. If pregnant, advise as in iii under Amenorrhoea.

iv) If not pregnant, reassure that hormonal contraceptives do cause slight weight gain. If weight gain is not acceptable, stop the COC and counsel for another method.

g) *Breast Tenderness*

i) Rule out pregnancy and advise accordingly.

ii) Rule out breast lumps and in case of lumps, rule out cancer of the breast.

iii) If breast feeding, rule out infection.

iv) Reassure. Put on low dose pill (if on high dose) or switch over to progestogen pill.

v) Reassure.

The drug interaction, rumours and facts about pills, COC screening and follow up cards are given in Annexures 1, 2 and 3 respectively.

2) **Progestin only Pill (Mini Pill, POP)**

Progestin only pills contain synthetic progestogens but no oestrogen. These pills are taken continuously. POP must be taken at the same time every day. Because the hormone dose is small, forgetting one days pill can cause the method to be ineffective that month. POPs are not a good choice for a client who is unwilling or unable to obtain and consistently use them.

Mechanism of action: It causes cervical mucous to be become thick and impenetrable to sperms. The endometrial lining becomes thin and atrophic, so not conducive to implantation. Suppress ovulation in many cycles.

Effectiveness: 96.5 to 99.5%.

Indication: Breastfeeding woman; woman with high BP; woman more than 35 years and smoking; where neither COCs are not suitable nor other effective methods are suitable; women with sickle cell disease.

Advantages: Does not affect lactation; does not increase BP and headache; theoretically less risk of cardiovascular side effects; decreases painful menses; decreases menstrual blood loss there by decreases anaemia; does not increase blood clotting; provides some protection against pelvic inflammatory disease because of thick cervical mucous.

Disadvantages: POP has Ii high failure rate as compared to cars; relatively high rate of ectopic pregnancy and more likely to cause menstrual irregularities and spotting/ heavy bleeding. It does not protect against development of ovarian cysts, SID and AIDS. Occasional conditions which mayor may not be related to the use of POP use are headache, mood changes, weight gain, breast tenderness, nausea, dizziness, acne and hirsutism.

Selection of clientele: Can be given to woman in whom COC is contraindicated. It can be used by lactating women and should not be used by women who experience abnormal genital bleeding and who has had ectopic pregnancy. It is not a good choice for those women who are unable or unwilling to obtain the pill and use them consistently.

Selection of drug: There is no important difference between mini pill preparations. Warning signals that a clientele should know is to seek medical care to check for pregnancy and ectopic pregnancy (if there is more than 45 days of amenorrhoea).

26.2.2 Implants (Norplant)

Norplant is currently the only implementable contraceptive implant in wide use. It consist of 6 tiny silicone rubber capsules containing the progestogen DL Norgestrel. They are surgically inserted under the skin on the inside of the upper arm by a trained medical personnel. The tubes allow a steady diffusion of drug into the blood stream. The implants must be surgically removed when the steroid is used up (i.e. after 5 years) or when woman wishes to discontinue the method. It is very effective in preventing pregnancy.

Mechanism of action: It makes the cervical mucous thick and thus impenetrable to sperms. It makes the endometrium thin and atrophic, thus not conducive to implantation and also inhibits ovulation in many cycles. The contraceptive effects start 24 hours after insertion if inserted within 7 days of menstrual cycle. Effect continue for 7 years and need to be replaced if the woman wants to continue the method.

No contraceptive effect remains after the removal of implant. The woman can become pregnant during the next menstrual cycle.

Effectiveness: 99.7%.

Advantages: As effective as surgical contraception but still reversible; provides definite birth control for 5 years; decreases blood loss during periods thus prevents and improves anaemia; does not interfere with sexual intercourse and can be used in

breastfeeding women. The acceptors of implant do not have to remember dates except follow up visits.

Disadvantages: Does not protect against STDs and AIDS; require minor surgical procedure for insertion and removal; provider dependent; very small risk of infection at the site of insertion; causes menstrual irregularities and spotting. In occasional women, it causes heavy and prolonged bleeding that decrease over time and amenorrhoea may occur for several months.

Occasional conditions which may or may not be due to norplants are headache, mood changes, weight gain or weight loss, breast tenderness, nausea, dizziness, acne and hirsutism. It does not prevent ectopic pregnancy, ovarian cysts and may not be quite effective for heavy weight women.

Selection of clientele: It should not be used in cases of suspected pregnancy; abnormal genital bleeding; history of cardiovascular disease; malignancy; suspected for breast cancer or if the client is taking drugs like rifampicin or anticonvulsants.

It is indicated when no more children are desired: where a risk of increased cardiovascular complications with COC's are present and where other methods requiring dally use becomes difficult to use. It is also indicated when oestrogen related complications develop during COC use (high BP, headache), in more than 35 years and where contact with the service provider a regular basis is difficult.

Selection of method: Norplant is the only implant available currently. Warning signals that a user should know is to seek medical care in case of dizziness; headache, heavy bleeding and infection at insertion site.

26.2.3 Injectables

Injectable contraceptives are the synthetic hormone injected into the muscle. These are available as 3 months, 2 months and also monthly injections. The synthetic hormone progestion is used in all these injections. But the monthly injection also contains oestrogen in addition.

The products available are:

- **DMPA** (Depot medroxy progesterone Acetate): Available as Depot Provera, 150 mg, injected 1M every 3 months.
- **NET-EN** (Nor ethindrone enanthate): Available as Noristerat, 200 mg, injected IM every 2 months.
- **Cycloprovera/Cyclofem:** A combination of 25 mg depot medroxy progesterone acetate and 5 mg oestradiol cypionate injected monthly.
- **Mesigyna:** Available as HRP 102, a combination of 50 mg norethindrone enanthate (NET-IN) and 5 mg oestradiol valerate, injected monthly.

Mechanism of action: It prevents pregnancy by making cervical mucous thick and impenetrable to sperms and makes the endometrium thin and atrophic making it non-conducive for implantation. It also suppresses ovulation.

Effectiveness: 99-99.5 %

Advantages: It is an effective reversible contraceptive and easy to use; convenient as it requires injections once in 3 months/2 months/every month (depending on the preparation); has no serious side effects; appeal to woman who feel confident about injections, do not interfere with lactation and the return of fertility is not impaired (though delayed by 3-4 months). It may have health benefits similar to oral contraceptives. Does not require action before or after intercourse.

Disadvantages: Causes menstrual disturbances (up to 25% discontinue because of this). Heavy bleeding in uncommon but inter menstrual bleeding and amenorrhoea after delayed use occur in about half of the users. Return of fertility delayed by 4-8 months after the last dose.

Selection of clientele: One should not use injectables if pregnancy is suspected, in case of undiagnosed vaginal bleeding, history of cardiovascular disease, known cancer breast.

It is indicated for those, for whom, the timing of return of fertility is not important; who do not desire more children and those, who have a risk of cardiovascular complications from OCPs. It is also indicated where other methods requiring daily usage is difficult to use; oestrogen related complications developed on OCPs (headache, high BP); amenorrhoea is acceptable and contact with service provider on a regular basis is difficult.

When to take injections: Contraceptive effect starts immediately if injection is given between day 1 and day 5 of menstrual cycle. If injections are given from 6 days after last period use abstinence or barrier method.

For client's convenience, repeat injections can be given 2 weeks early or 2 weeks later than the exact scheduled date. Deep intramuscular injections to be given. The site should not be messaged after injection.

Selection of method: Of all injectables, DMPA is best tested, longer lasting and more effective. Net-EN and monthly preparations have also proven reliable. Warning signals that a user should know is that in case of dizziness, headache and heavy bleeding, medical care is to be sought.

26.2.4 Progestasert and Vaginal Rings

Progestasert is an intrauterine device impregnated with. It is 'T' shaped and slowly releases progestogen locally. Since it decreases menstrual bleeding, it is suitable for woman with heavy vaginal bleeding. Progestasert needs to be replaced every year. The progestogen acts locally and makes the endometrium not conducive to implementation and makes cervical mucous impenetrable to sperms. The disadvantages are intermenstrual spotting and increased risk of ectopic pregnancy as with progestogen only contraceptives.

Vaginal rings are impregnated with or progesterone. Vaginal rings are different from other long acting hormonal methods. Rings are placed ill the vagina by the client and removed by herself. Thus it is not user dependent. The action is same as other progestogen only methods. But rings are less effective than implants or injectables. The other side effects are also like other progestogen only methods. Expulsion of ring is an added problem. These rings can be used by lactating women and can remain ill vagina for 3 months.

Check Your Progress 1

1) How does combined oral contraceptive pills act?

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2) List three important non-contraceptive health benefits of OC's.

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3) What are the warning signals an OC user should know?

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4) Name the drug used in injectable contraceptives.

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26.3 EMERGENCY CONTRACEPTIVE PILLS

Emergency Contraceptive Pills (ECPs) are hormonal contraceptives that can be used to prevent pregnancy following an unprotected act of sexual intercourse within the past 72 hours. It provides an important option to women who have had unprotected intercourse due to non-use or a contraceptive accident. It is a very critical option for preventing an unwanted pregnancy from sexual assault.

26.3.1 Pharmacology of ECP

All the hormonal oral contraceptive pills (combined as well as single) in varying doses can be used as ECPs. However, the Drug Controller of India has approved only levonorgestrel (LNG) (progestogen-only) for use as ECP. LNG is available in 0.75 mg tablets. LNG is the 'dedicated product' for emergency contraception as it will be specially packaged at the correct dosage for use as ECP. The guidelines are for administration of LNG.

Mechanism of Action

The precise mode of action of ECPs is uncertain and may be related to the time it is used in a woman's cycle. ECPs are thought to prevent ovulation, fertilization and/or implantation, depending on the phase of menstrual cycle, through the various mechanisms listed below:

i) Inhibition or delay of ovulation when used prior to ovulation

ii) Thickening of cervical mucus

iii) Direct inhibition of fertilization

iv) Histological and biochemical alteration in endometrium leading to impaired endometrial receptivity to implantation of the fertilised egg.

v) Alteration in transport of egg, sperm and embryo

vi) Interference with corpus luteum function and luteolysis

The mechanisms for prevention of pregnancy are thought to happen before implantation takes place.

ECPs are not effective once the process of implantation has taken place. ECPs will not cause an abortion.

Effectiveness

The efficacy of the ECP used **correctly** (time and dose as prescribed) after a single act of unprotected sexual intercourse is about 98% (2% failure rate).

Regular use of ECPs is not recommended due to the following reasons:

- Overall ECPs are less effective than regular contraceptives.
- Since ECPs are used only once, it cannot be directly compared to the failure rates of regular oral contraceptives which are calculated based on use during a full year.
- With frequent use of ECPs, the failure rate would be higher than of regular hormonal contraceptives.

Advantages and Disadvantages of LNG

a) *Advantages*

i) Effective if taken correctly as prescribed.

ii) Safe for all women including those who have conditions, that are listed as precautions in case of other hormonal contraceptives.

iii) Does not affect lactation.

iv) Use not associated with foetal malformation or congenital defects.

v) Does not increase the risk of ectopic pregnancy.

b) *Disadvantages*

Has to be used within 72 hours of the first act of sexual intercourse:

i) Second dose after 12 hours in mandatory

ii) Effectiveness decreases with frequent use

iii) Does not protect from STDs/HIV

iv) Side effects: Nausea, Vomiting, irregular bleeding per vagina, breast tenderness, headache, dizziness, fatigue.

26.3.2 Conselling for ECP

Counselling is one of the critical activities when administering ECPs for the following reasons:

i) Counselling would help to provide emotional support to a client/couple who is worried about a pregnancy due to unprotected sexual intercourse.

ii) It establishes rapport and confidence in the provider as the provider is helping the client/couple to meet a **critical need,** which is prevention of an unwanted pregnancy.

iii) It provides an opportunity to help the client/couple start using regularly a contraceptive of their choice as well as ensure sustained correct use of the same.

Every client should be counselled to help decide to plan her/his family and to choose a method based on informed choice. Wherever possible/spouse/partners should be counselled.

The following are the critical steps in counselling for emergency contraceptive pills

i) Building a rapport with the client by greeting the client as this is critical in finding out accurate information for effective use of ECP such as the timing of first unprotected intercourse. It is also important for acceptance of a regular contraceptive.

ii) Make the client feel comfortable psychologically as well as physically. The former is extremely important, as she may be very anxious. In case of sexual assault, the effort has to be greater as the woman would be emotionally distraught.

iii) Be supportive and non-judgemental especially in cases of sexual assault.

iv) Identify the reason for wanting ECP and when the first unprotected sexual intercourse happened. In case of a contraceptive accident, ask the client to describe the use of the method.

v) Identify the client's needs by asking relevant questions: personal, social, family, medical, reproductive health including reproductive tract infections/STDs, family planning goals and past/current use of family planning methods (if not found out earlier).

vi) Using simple language, provide information on the following:

- What is ECP
- Timing of use
- Method of action
- Effectiveness in preventing pregnancy (especially if implantation is likely to have taken place)
- Effectiveness in causing abortion
- Effect on the foetus if pregnancy continues
- Advantages, side effects
- Effect on preventing future pregnancies
- Importance of regular use of a contraceptive
- Various contraceptive methods including mechanisms of action of methods, their benefits and disadvantages and timing for initiation of the method and where to obtain the services.

iv) Once the client/couple is sure about using the ECP, do a client assessment as described later, and if found eligible, provide the ECP. Record in the client card.

v) Instruct the client about taking the ECP, emphasising the need for second dose, likely side effects and what to do in such situations.

vi) Discuss when to return for follow up and for initiating the use of a regular contraceptive.

vii) Provide a packet of condoms in case of STDs/HIV if condoms have not been chosen as the method.

viii) Maintain confidentiality and privacy must be ensured at all counselling sessions.

Confidentiality and privacy should be maintained during counselling.

Counselling on Return Visit After ECP

Every time a client comes for follow-up, it is important to counsel the client to ensure continuation of the method.

i) Ask the client about any side effects

ii) Ask about her last menstrual period: flow, duration

iii) If not pregnant, counsel about family planning methods as described in the earlier sections.

26.3.3 Client Selection

Eligibility Criteria for ECPs

a) ***Indications***

Timing in relation to the first act of unprotected sexual intercourse is critical for determining the eligibility for use of ECP.

Indicated in all cases within 72 hours of the first act of unprotected intercourse in the following situations:

i) Non-use of any contraceptive

ii) Inconsistent use of contraceptive

iii) Contraceptive accident due to:

- Rupture or slippage of condoms
- Failed coitus interruptus
- IUD expulsion
- Miscalculation of safe period days
- Failure to take oral pills for more than three days in a row

iv) Sexual assault

Timing of first act of unprotected sexual intercourse (within 72 hours) is critical in determining eligibility for use of ECP.

b) ***Precautions***

There are no known medical conditions that are precautions for the use of the ECP as only small doses of the hormone is used for single course.

ECPs must not be prescribed in suspected/confirmed pregnancies. The reason is not because the ECP will cause any malformation in the foetus, but because of its ineffectiveness in terminating the pregnancy.

Any client who has had the first act of unprotected sexual intercourse more than 72 hours ago must not be prescribed ECPs as the failure rate is very high.

ECPs should not be advised in suspected/confirmed pregnancies. ECPs should not be prescribed in any client who had the first act of sexual intercourse more than 72 hours ago.

Client Assessment

- Menstrual history should be taken carefully to exclude pregnancy and should include the date of last menstrual period, whether the flow and duration was normal.
- Contraceptive history should be taken. If using any contraceptive, ask about the method of use to find out whether it is correct and is being used consistently. In case of Cu-T user, ask about history of expulsion.
- Ask carefully and sensitively questions to establish the timing of first act of intercourse. Explain why the questions are being asked.
- Other health assessment such as laboratory tests or pelvic examination is recommended unless indicated to rule out a suspected pregnancy or other conditions.

26.3.4 Guidelines for Instruction and Follow Up

Guidelines for Instructing Clients About ECPs

Steps for Instructing a Client

i) Make certain that the client does not want to become pregnant, but that she understands that there is still a chance of pregnancy even after ECPs. Explain that the ECP should not cause any harm to the foetus if it fails to prevent pregnancy.

ii) Ensure that the client understands the dosage schedule given below:

- First dose of a tablet of ECP (Levonorgestrel 0.75 mg) is taken as early as possible within 72 hours of the first act of sexual intercourse.
- Second tablet to be taken within 12 hours of the first tablet.

Make sure that the client understands that the first tablet should be taken as early as possible, within 72 hours of the first act of sexual intercourse. The timing of the second tablet within 12 hours is also important.

iii) Explain that the pills can be taken with sips of water. Also explain that taking the pills with milk or with a snack helps to decrease the nausea that may be felt.

iv) Explain that taking additional pills, more than the two prescribed, do not increase its effectiveness, but increase the side effects.

Additional pills (more than the two prescribed) will not increase effectiveness.

v) Explain the common side effects and what to do in such situations.

vi) Make sure that the client understands that if she vomits within two hours of taking the pills, the dose must be repeated as she may have vomited the pills out.

vii) Explain that contrary to common belief, a woman taking ECP does not menstruate immediately after taking ECP.

viii) Make sure that the client understands that the ECPs will not protect her from pregnancies resulting from future unprotected intercourse.

- Advise a method such as condom till her next menstrual cycle after which a method of client's choice can be provided.
- Demonstrate the use of condoms and ask the client to demonstrate its use.

Make sure that the client understands that the ECPs do not protect pregnancies as a result of future unprotected sexual intercourse.

ix) Explain that ECPs do not protect from STDs/HIV and the need to use condoms if the client or her partner is at risk.

x) Stress the importance of **follow up:**

- If delay in menstruation
- Immediately after menstruation for initiating regular use of a contraceptive
- If side effects are not controlled after following the advice.

Side Effects and Their Management

As explained earlier, there are very few minor side effects to ECP. Some of the common side effects and their management is given below. *Proper counselling clients prepares the client for side effects and improves the tolerance.*

i) *Nausea*

Nausea occurs is approximately 20 per cent of women using progestin—only ECPs. Taking the pill with milk or snack may help reduce nausea.

ii) *Vomiting*

Vomiting occurs in approximately 5 per cent of women using progestin—ony ECPs.

- If vomiting occurs more than two hours of taking emergency contraceptive pill, women should not worry as the pill is already in the system by that time.
- But if vomiting occurs within two hours of taking ECP, repeat another dose with an anti emetic or ECP may be administered vaginally.

iii) *Irregular Uterine Bleeding*

Some women may experience irregular bleeding/spotting after taking ECPs. This should not be understood as periods. The majority of the women will have their menstrual period on time or slightly early.

Assess women having excessive/prolonged bleeding for pregnancy and its complications or any other pelvic abnormalities.

iv) *Missed Period*

A pregnancy test is mandatory if menstrual period is delayed for more than two weeks than expected date.

There are no known teratogenic effects on the foetus if the pregnancy cannot be prevented. This could be due to the fact that the ECPs are taken long before organogenesis starts.

v) *Other Side Effects*

Other side effects are breast tenderness, headache, dizziness, and fatigue. These side effects generally do not last more than 24 hours. Prescribe simple analgesics.

Timing for Initiating Regular Sse of Contraception

The table given below provides the appropriate timing for initiating regular use of contraception:

Method	Timing of Initiation
1) Condom	Can be used immediately. If decided on another method, the condoms should be used till the next periods.
2) Oral contraceptives	If found eligible for use, start on fifth day of menstruation
3) IUCD	If found eligible for use, insert within 7 days of menstruation.
4) Female sterilisation	If found eligible for use, admit for surgery within 7 days of menstruation
5) Male sterilisation	If found eligible for use, husband can go immediately for surgery.

Check Your Progress 2

1) What do you understand by emergency contraceptive pills?

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2) Name the drug approved for emergency contraceptive pills in India?

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3) How do you prescribe ECP?

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26.4 NEWER METHODS OF HORMONAL CONTRACEPTION

The following newer methods are being tried for contraception.

1) **Biodegradable Implants:** Biodegradable implants deliver progestins from a carrier that gradually dissolves in body tissue. Thus the carrier never has to be removed. Once the carrier capsule starts getting dissolved it cannot be removed. Two types of biodegradable implants are tested i.e. Caproner and Norethindrone pellets.
   - **Caproner:** It contains 30-50 mg are released daily and is effective for 18 months.
   - **Norethindrone pellets:** Each pellet contains 35 mg norethindrone and small amount of cholesterol. 2-4 pellets are used and is effective for one year.
2) **Injectable Microspheres and Microcapsules:** These contain biodegradable copolymer and one or more hormones at varying rates to achieve a fairly constant doze (Hormones used are Norethindrone, Norgestimate Progesterone, combination of Norethindrone and Ethinyl oestradiol). These are effective for 1, 2 or 6 months depending on formulations. It can be administered like injections and once given cannot be removed.
3) **Hormonal Vaginal Rings:** Vaginal rings containing both oestrogen and progestogen have been tried. These vaginal rings are inserted for 3 weeks.
4) **RU-486:** RU-486 is an antiprogestational agent. It competes with progesterone for the receptors in the uterus so that the progesterone is displaced and pregnancy cannot be sustained. Thus it acts as a menstrual regulator/abortifacient. For the abortion process to be complete, prostaglandin is given after RU-486 is taken. Prostaglandins cause uterine contractions and complete the abortion. It is effective up to 6-8 weeks only. The procedures take several days and requires 2 or more visits to service provider. Bleeding or spotting may last up to 8-10 days. Cramping, nausea, diarrhoea may occur. Heavy bleeding may occur in 2% of women and failed procedure need back up. It is not marketed in India. To use RU-486, back up facilities to complete abortion must be available. Success rate is claimed to be 90%.

26.5 METHODS UNDER SPECIAL CIRCUMSTANCES

Suggested methods (even though all other options are available) for different special circumstances are mentioned below:

a) **Delaying first child:** For delaying the first child after marriage, the first choice is usually combined pill. This is very effective and not intercourse related. This is followed by barrier methods for 1 month before attempting conception. Second choice is barrier methods which is dependent on intercourse.

b) **During breastfeeding:** For first 6 months, exclusive breastfeeding alone is adequate if periods have not returned. After 6 months of delivery/if menstruation returns earlier/if exclusive breastfeeding not practiced, other methods have to be used. They are barrier method that could be used till period returns, IUCD and progestogen only pills.

c) **Spacing after breastfeeding:** First choice is combined oral contraceptive pills for greater effectiveness and regular period. IUCD is next choice.

d) **After the last child till decision on permanent method:**
   - IUCD
   - Barrier methods
   - Progestogen only pill

e) **After family is completed:** If the other methods are not acceptable, then vasectomy/ tubectomy be followed.

f) **Adolescence:** The best method is to say 'No' to sexual intercourse. Choice depends on religious views, steadiness of relationship and frequency of intercourse.

- Barrier methods if possibility of multiple partners or partners having other partners. Offers protection from STD's and HIV. It requires high degree of motivation and adequate knowledge about the method.
- In steady relationships COCs are preferred if regular menstruation has been established.

Check Your Progress 3

1) Name one antiprogestational agent.

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2) Enumerate the contraceptive methods available for a breastfeeding woman.

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26.6 LET US SUM UP

After reading this unit, you should feel confident in providing hormonal contraception especially oral contraceptive pills and injectable contraceptives. Selection of patients, advantages, disadvantages, side effects, complications and how to deal with them have been discussed in this unit.

26.7 KEY WORDS

Adolescence	**:**	Person between age 10-20 years
ECP	**:**	Emergency Contraceptive Pills
LNG	**:**	Levonorgestrel
Minipill	**:**	Progestogen only pill
NFHS	**:**	National Family Health Survey
Pill/OCP	**:**	Oral Contraceptive Pill

26.8 ANSWERS TO CHECK YOUR PROGRESS

Check Your Progress 1

1) Inhibits ovulation; Makes cervical mucous thick and impenetrable to sperm; Induces changes in endometrium not conducive to implementation.

2) The benefits are:

   - Regularises menstrual cycle, relieves dysmenorrhoea and premenstrual tension, decreases menorrhagia— reduces the chance of anaemia.
   - Decreases risk of pelvic inflammatory disease.
   - Reduces the incidence of ectopic pregnancy.

3) Warning signal an DC user should know are: ACHES (Abdominal pain, Chest pain, Headache, Eye problems, Sever leg pain/swelling).

4) DMPA, NET-EN

Check Your Progress 2

1) Emergency contraceptive pills are hormonal contraceptives that are used to prevent pregnancy following an unprotected act of sexual intercourse within the past 72 hours.

2) Levonorgestrel (LNG) progestin only pill is the drug approved for emergency contraception in India.

3) Levonorgestrel (0.75 mg) pill is prescribed. First tablet is to be taken as early as possible within 72 hours of the first act of sexual intercourse. The second tablet is taken within 12 hours of the first tablet.

Check Your Progress 3

1) RU-486 (Mifipristone)

2) i) IUCD insertion at 6 weeks (during first postnatal check up)

   ii) Condom

   iii) Minipill (Progestin only pill)

   iv) LAM (Lactational amenorrhoea method) for 6 months if she is exclusively breastfeeding and has amenorrhoea.

26.9 FURTHER READINGS

Government of India: *Guidelines for Oral Contraceptive Administration for Medical Officers*, Department of Family Welfare, Ministry of Health and Family Welfare.

Guillebaud, John, *Contraception —Your Questions Answered*, Churchill Livingstone, second edition, 1993.

University of North Carolina, *Guidelines for Clinical Procedures in Family Planning Programme for International Training in Health (INTRAH)*, School of Medicine, 2nd edition, 1993.

World Health Organisation, "Improving Acess to Quality of Care in Family Planning", *Medical Eligibility Criteria for Contraceptive Use*, Family and Reproductive Health Division, 1996.

World Health Organisation, "Improving Access to Quality of Care in Family Planning", *Medical Eligibility Criteria for Contraceptive Use*, Second edition. Department of Reproductive Health and Research, 2000.

Annexure 1

Drug Interactions

A. Drugs that may reduce the efficacy of COCs		
Antibacterial	**Anticonvulsants**	**Antifungals**
Rifampicin Penicillins Chloramphenicol Cephalosporins Metronidazole Sufonamides Nitrofurantion	Barbiturates (Pheno-barbitone, Primidone	Griseofulvin
B. Drugs that are affected by COC		
Antibacterials	**Anticonvulsants**	**Anticoagulants**
Trolengomycin (increases toxicity)	Barbiturates:Phenytoin (increases toxicity)	Warfarin (decreases effect)
Antidepressants	**Antidiabetic agents**	**Antihypertensive agents**
Tricyclic:clomipramine, amitryptiline (increases effect)	Insulin Oral hyoglycaemics (decreases effect)	Methyl dopa (decreases effect) Beta blocking agents (increases effect)
Antianxiety	**Theophylline preparations**	
Benzodiazepines: Chlordiazepoxide, diazepam (increaeses the effect of the above) Lorazepam (decreases effect)	Aminophylline Theophylline (increases risk of toxicity)	

Source : ICMR: Guidenes for family Planning Service including Counselling. Screening, Procedure, Follow-up and Infection Control. Module for PHC Medical Officers 1996.

Rumours and Facts

One of the reasons for a smaller percentage of women using COC is the myths about the COC. The following is a list of common myths and the facts. It is important to be aware of these to effectively counsel the clients who opt for COC.

Myths	**Facts**
1) Pill causes cancer.	Pills offer protection against cancers of the ovary and endometrium. There is no demonstrated increase in risk of breast cancer.
2) Pill causes infertility.	Pills do not lead to permanent infertility. After stopping the pill fertility returns immediately in most women.
3) Pills cause heat in the body and need drink milk to decrease the effect. Most clients cannot afford to buy milk.	The pills do not cause any heat in the to body. It does not cause hyperacidity. Milk has no effect on the side effects of the pill.
4) Pill affects women's health permanently.	The low dose pills do not lead to major complications, as the dose of hormones is small. Experiences from India and allover the world have shown that if the women are properly screened and the pill is given only to the women who are eligible for use, then there are no serious complications. The risk of dying from pregnancy and childbirth is higher than the risk of dying from complications of the pill.
5) Pills cause deformities in babies.	There is no increased risk of giving birth to deformed babies by women who have taken COC. Even when the pill is taken accidentally during pregnancy, there is no risk of the baby being born deformed.
6) Pills must be discontinued for 2-3 months as continued use may cause ovarian dysfunction.	The pills can be safely used continuously as long as one desires. Fertility returns immediately after stopping the pill in most women. Discontinuation of use of pills without using another method can lead to an unwanted pregnancy. There is no need to advice few months of 'no pill'

Annexure 3

COC Screening and Follow-up Card

Name of Health Centre: District: State: Registration number:

Name of the client: Age:

Address:

Menstrual history

Age at menarche: Date of last menstrual period

Menstrual cycle: regular/irregular Flow: Scanty/moderate/heavy

Duration: days Pain:

Obstetrical history

Total number of pregnancies: Total number of living children: female male

Number of abortions: Induced Spontaneous:

Date of last delivery/C-section/abortion:

History of jaundice during pregnancy:

History of ectopic pregnancy.

History of puerperal Infection after delivery or abortion:

Breast feeding

Currently breast feeding: Duration:

Gynaecological history

Inter-menstrual bleeding: Post-coital bleeding:

History of cancer of the cervix or uterus:

History of pelvic tuberculosis.

History of RTIs/STDs/HIV

. Discharge per vagina: Colour of discharge:

Itching Ulcers of the genitalia: Swelling of the genitalia or groin:

Lower abdominal pain: Abdominal mass:

Medical history

History of smoking: (mention number of cigarettes or bidis)

History of stroke/severe pain in calf muscle (deep vein thrombosis)/pulmonary embolism

History of breathlessness/heart disease:

History of hypertension:

History of severe headache/ migraine

History of jaundice (specifically ask about jaundice during pregnancy)

History of liver disease or gall bladder disease:

History of diabetes: Years since diagnosed: Complications:

History of chronic cough/tuberculosis: On treatment:

History of epilepsy: On treatment:

History of lumps in the breast or cancer:

General and systemic examination

Weight: Pulse: BP: Presence of anaemia:

Signs of jaundice:

Breast: Lumps/ulcer

Heart:

Abdomen: Liver palpable: Any mass: Any tenderness:

Pelvic examination

External genitalia: Normal

Abnormal discharge/redness/patches/ulcer/growth/warts/ swelling

Per speculum examination: Normal

Discharge/bleeding/ ulcer / growth

Bimanual examination

Cervix: Pointing backwards/ forwards Soft/firm/hard, tenderness on movement/ freely mobile, smooth/irregular surface, bleeds to touch

Uterus: Normal

Anteverted/retroverted

Normal/bulky/small, smooth/irregular surface, soft/firm, mobile/fixed

Adenexa: Normal

Tenderness, mass

Laboratory examination:

Haemoglobin: Urine sugar:

Vaginal smear: Pap smear:

Details of COC administration

Type of COC prescribed: Date of starting the COC:

Date advised for follow up:

Follow Up

Date	Menstrual history	BP	Pelvic examination	Remarks