Injectable Contraceptives: Expanding the Choice

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Abstract: ***There are several contraceptive choices available for the couples to choose from. Injectable contraceptives are introduced in India under Antara scheme. The injectable contraceptives are the fourth most common and effective contraceptive device used by the females worldwide. The two available forms are DMPA (Deport medroxyprogesterone acetate) and NET-EN (nor-ethisteroneenanthate). More choices have expanded the basket for the couples to choose suitable contraceptive devices for themselves.***

Keywords: injectable contraceptive

1. Introduction

Family planning is one of the 10 great public achievements of the 20th century. The availability of family planning services allows individuals to achieve desired birth spacing and family size, and contributes to improved health outcomes for infants, children, woman and families. Use of contraception is substantial and effective preventive strategy to reduce maternal mortality, especially in developing countries. Numbers of unintended pregnancies and unmet contraceptive need are still high in many developing countries and hence abortion related deaths are also very high. Every two hours a woman dies from an unsafe abortion in India hence the problem of unsafe abortions is especially acute. In India the couples are provided with cafeteria approach where they have various options of contraceptive devices to choose from.

The choice of contraceptive methods depends upon various factors like diverse ability, efficacy common safety, acceptance, accessibility and availability of devices, availability of skilled providers, user dependence, frequency of sexual activity and personal preferences of a method. There is a wide choice of hormonal contraception which can be administered by various routes like oral, injectable, transdermal, or intrauterine. Studies suggests that the non-user dependent method of contraceptive device, yields better and effective coverage. In many developed and developing countries injectable hormonal contraception is rated high among various choices. They have the best balance of all the parameters of any contraceptive method. They are less user dependent then combined oral contraceptive and progesterone only pills.

Barrier to family planning services

- Cost of services
- Limited access to publicly funded services
- Family planning clinic locations and hours that are not convenient for clients
- Lack of awareness of family planning services among hard to reach population
- No or limited transportation
- Inadequate services for men
- Lack of youth friendly services
- Pro-natal social norms
- Pregnancy expectations early in marriage
- Limited access to modern spacing contraceptives
- Negative attitudes toward specific contraceptives.

Injectable contraceptives in India: historical perspective

Injectable contraceptives have been in use by registered medical practitioner in India for decades- NET- EN since 1986 and DMPA since 1993. Attempt to introduce injectable in the government programme began in the 1980s the subject has been contagious from the time they were first introduced by a pharmaceutical company on trial basis. Broadly there were concerns about the health impact of injectables and whether there was adequate infrastructure for follow up and care.

In India DMPA was approved for marketing in 1993, ICMR recommended it’s post marketing surveillance. After one year in 1994 a case was filed in supreme court, asking for ban on DMPA but post marketing surveillance found that DMPA was safe and effective in 1997. After a long run in 2001 court case ended and ban on DMPA was lifted.

Indian government initiative for injectable contraceptives

A pre programme introductory study involving NET EN 200MG was initiated through 42 postpartum centres and 33 primary healthcare centres across several states in 1970. In early 1980 clinical trials on preparation containing the progesterone NET EN but was not containing DMPA. In 2002- 2008 ICMR conducted phase 3 trials of one monthly Injectable Cyclofem at 16 human reproductive resource center, through a cafeteria approach. After two years DMPA was also approved under ministry of health and Family welfare in 2010 under expert group meeting.

The Union Ministry of Health and Family Welfare on 5 September 2017 launched injectable contraceptive MPA under the ‘Antara’ programme in the public health system to expand the basket of contraceptive choices for couples. Moreover, it also launched a central family planning initiative 'Mission Parivar Vikas' with an aim to improve the access to contraceptives including injectable contraceptives. The mission is being implemented in 146 high focus districts with the highest total fertility rates in the country.

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Injectable contraceptive

Injectable contraceptives have been considered as one of effective method which is the non-user dependent. Deport medroxyprogesterone acetate (DMPA) and nor ethisteroneenanthate (NET- EN) are two progesterone only injectable contraceptive available. DMPA is licenced as a first line contraceptive for long term and short-term use. NET-EN is licensed for short term use up to injections by women whose partners undergo vasectomy, until the victim is effective, and by a woman immunised against rubella, to prevent pregnancy until immunity develops. The health ministry recently revealed that woman in Rajasthan went for using 88,000 injectable contraceptive in 2018 – 19 to 2019-20. Officials working on the project have revealed that they were able to achieve 90% of their target of injectable contraceptives in spite of the pandemic.

Injectable contraceptives have an effectiveness rate of more than 99 percent when used correctly and consistently and 97 percent when commonly used (WHO, 2012). They are available in two forms: progestin- only and combined. Combined injectable contraceptive also called monthly injectable contain two hormones - progestinandestrogen- that act like the natural hormones progesterone and oestrogen found in human body.Both progestin only and combined injectable methods work primarily by preventing ovulation and thickening cervical mucus.

Injectable contraceptive is the fourth most popular contraceptive method worldwide after female sterilisation, intrauterine devices, and oral contraceptive pills. Until 2006,DMPA was registered in 179 countries, NET-EN in 91 countries and Cyclofem in 12 countries. Across continents the percentage of users is the highest in Africa. These injectable have been extensively studied, both in India and other parts of the world, and at the end it is considered as safe and effective method of contraception. In Indonesia, the injectable contraceptive is the most widely used contraceptive method among women. DMPA is popularly called as 3-month birth control injection

Mechanism of Action

- It Inhibits ovulation-by suppressing mid-cycle peaks of LH and FSH. It also thickens cervical mucus under effect of depleted levels of oestrogen which prevents sperm penetration into upper reproductive tract.
- Due to high progesteroneanddepletedoestrogen, endometrial lining gets thin, which makes it unfavourable for implantation of the fertilized ovum

Benefits

The injectable contraceptives are having various benefits which can be grouped as contraceptive benefits and non-contraceptive benefits.

Contraceptive benefits:

1) Very high overall effective rates
2) No estrogenic effects
3) Suitable for lactating mothers (after 6 weeks post partum)
4) Reversible (7-10 months)
5) Independent of coitus
6) Accepted in many cultures of the world.
7) A private and confidential method

Non-contraceptive benefits:

1) Maydecreasemenstrualcrampsandreducepre-menstrualsyndrome/tension.
2) It helps to preventuterinetumours (fibroids).
3) Minimal drug interactions
4) It reduces risk of
    - Cancer of the uterus (endometrial cancer)
    - Pelvic inflammatory disease (an infection of the upper female reproductive organs)
    - Iron deficiency anaemia
    - Breast cancer, ovarian and invasive cervical cancer.

Apart from risk reduction, protesting injections do not increase the risk of high blood pressure or blood clots. Medroxy progesterone acetate (MPA) is currently considered safe for women who should not take oestrogen and maybe good choice for women with seizure disorder.

Disadvantages

1) Disturbances of the usual bleeding pattern occur in almost all women.
2) Once administered, the effects of the drug last until it has been fully metabolized by the user.
3) complain of feelings of bloatedness and breast tenderness
4) Weight gain
5) Headaches, mood changes, and loss of libido with use have all been reported.
6) Return of fertility may be delayed.

However, there is lack of reliable evidences about the incidence of these side-effects.

Eligibility criteria and contraindications

Injectable contraceptive DMPA is safe for all women, who are of any age, including adolescents and woman over 45 years old, those who are unmarried, just had an abortion, miscarriage, HIV/STD infectionare also eligible for DMPA use. Other group of women who may benefit from injectable contraceptives are the women who:

1) Have medical contraindications to other methods
2) Are unwilling or unable to use other methods
3) Have experienced prior contraceptive failure
4) Wish not to have any more children but do not wish to be sterilized
5) Lack the continuous motivation necessary with other methods.

Process

After ensuring proper counselling of the client, DMPA is administered in the upper arm (deltoid muscle) or the buttocks (gluteal muscle, upper outer portion) or thigh (outer anterior). client's preference should be taken into consideration before administering the injection. The injection site should never be massaged. In case of oozing, a gentle pressure may be applied on the site of administration. Follow up after 90 days should be planned with the client. The health professional must ensure post-injection counselling. Recording of essential data regarding any side-effects, continuation of the method and follow up care etc should be done by the health personnel.

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Follow upcare

Health professionals have to remember that follow up of client is an important step for quality services and help client to continue using the method till they want protection from unwanted pregnancy. It is seen that clients who are taking injection DMPA usually tend to discontinue the method after a few injections as they get concerned with the side effects or many may forget to come for repeat injections. This leads to high dropouts, particularly after the first injection. Clients need a lot of reassurance and reminders for continuing the method. Health professionals should discuss the importance of follow up visit with the client, inform the client about the date for next injection and give DMPA client card to her after explaining about its content, with due date mentioned on it. Community health workers like ASHA and ANM can visit the client periodically an ask her regarding anxieties and concerns. This can minimise the number of dissatisfied clients thus helping them continue the method. The counselling should involve general counselling, method specific counselling, counselling for side-effects, immediate post-injection counselling and follow up counselling.

2. Conclusion

Injectable contraceptives are effective forms of contraceptives available under Antara scheme in India. It has been widely used in various countries by the women and is accepted among women because of its non-user dependent and reversible characteristic. It has several benefits and can be used by any female in reproductive age group.

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