



Adolescent Contraceptives

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Abstract

Adolescents contraceptive need to be the top most priority in the national policy to prevent the adolescent pregnancies and its adverse consequences. All the countries of the world should have their own national strategy liaison with global consensus regarding the Adolescent contraceptives.

Global challenge is to tackle the adolescents Pregnancy. Contraceptives use is the answer. So adolescents should be the centrals to everything we want to achieve, and to the overall success of the 2030 SDG Agenda. Without Contraceptive "SDG achievement" is not possible.

About 21 million 15-19 year old girls in developing countries become pregnant every year. Half of these pregnancies (49%) are unintended.

If we are successful to implement contraceptives among the youngsters, adolescent's pregnancy complications can be eliminated. But again this needs strong political motivation and hard work of health care providers.

Health care team should design and deliver a Confidential, personalized, adolescent's friendly service taking into account adolescent's psychosocial & sexual needs.

Almost all methods of contraceptives are suitable for adolescents except few. After taking a comprehensive medical history & assessing risk factors counselling should be done for risks & benefits. Good & sensible communication with women, their husband or partner is important.

It remains a critical aspect in empowering adolescents to make informed choices and only then adolescents will use contraceptives wholeheartedly.

Keywords: *contraceptives, pregnancy complications, adolescents, counseling.*

Introduction

Adolescents contraceptive need to be the top most priority in the national policy to prevent the adolescent pregnancies and its adverse consequences. All the countries of the world should have their own national strategy liaison with global consensus regarding the Adolescent contraceptives.

Adolescents are not simply old children or young adults. Their health and well being are engines of change in the drive to create healthier, more sustainable societies.

Approximately 80 percent of pregnancies among adolescents age 15 to 19 years are unintended in USA ^[1] and this is happening in every country. Global challenge is to tackle the adolescents Pregnancy.

The Contraceptives use is the answer. So Adolescents should be the centrals to everything we want to achieve, and to the overall success of the 2030 SDG Agenda. Without Contraceptive "SDG achievement" is not possible.

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Global scenery

Adolescents have high rates of unintended pregnancy leading to a range of adverse physical, social and economic outcomes across the world ^[2].

Pregnant adolescents face additional challenges that are specific to their physical and psychological immaturity and limited autonomy.

They are more likely to have a repeat pregnancy within a year of giving birth, which can place them and their children at high risk ^[3].

Globally more than 220 million women in LMIC (lower, middle income countries) have unmet need for family planning. Married adolescents often do not want a pregnancy, but have low contraceptive rates; 38 million of 15-19 years old adolescent girls are at risk of pregnancy and do not want a child in the next two years ^[4].

Current contraceptive use prevents approximately 272 000 maternal mortalities per year, and if current family planning needs were met, another 104 000 lives would not be lost, many of adolescents' lives will be saved.

In developing countries alone, the number of abortions among adolescents is estimated to be between 2.2 and 4 million annually. Adolescents often resort to unsafe procedures administered by unskilled providers and/or in unsafe conditions [5]. Among that 14% of all unsafe abortions in developing countries involve adolescent girls aged 15-19 years [6].

Adolescents are not fit to get pregnancy both physically and mentally. Adolescent pregnancies are associated with adverse outcome such as poor ANC, delayed intrapartum care, obstructed labour, prolonged labour due to undeveloped pelvis. 9%–86% of women with obstetric fistula develop from complicated adolescent's labour.

Also adolescent pregnancy is associated with Increased risk of Preterm labor & Still birth, chance of dying in the first year of life is more than 60% higher for babies born to the under less than 18s than for those born to older mothers [7].

Sustainable Development Goals now seeks to reduce the maternal mortality ratio to less than 70 deaths per 100,000 live births by 2030. So to achieve this ambitious goal contraceptive is the 1st step. Adolescent contraception reduces unintended pregnancies, the need for abortion and especially unsafe abortion thereby prevents deaths of mothers and children.

But there is definitely challenge to implement the adolescent contraceptives for every country.

- Implementing a contraceptive method that requires planning and forethought to prevent the "possibility" of pregnancy is difficult at this stage without monitoring and adult support. Husband or Mother /Sister need to know about contraceptives too. They may guide the adolescents and young adult women. Though late adolescence (>18 years) are more capable of higher-level planning, decision making, and problem solving, skills essential to effective contraceptive behavior [8,9]. Parents also plays an important role, home in which sexual behavior is discussed openly and honestly, with parents who are receptive to the special needs of the adolescent, is much less likely to have to endure the heartbreak of a teen's undesired, out-of-wedlock pregnancy, dropping out of school, or running away.

There are lot of issues that affect the adolescent's choice and utilization of contraceptive methods. Government, nongovernment organization, stakeholders and health care providers (HCP) need to come together and work hand in hand to overcome the barriers & challenges to implement the contraceptives for the young women.

Before embarking contraceptive, counseling is most important especially for the adolescent. Good counseling ove brings the high rate of compliance. We need to take account to the following factors

Psychosocial development

Previous health-care experience

Access to services, cost & access of contraceptives

Health and education structures and Social and cultural norms.

The religious belief, knowledge, information level, educational status, myth, superstitions, and familial pressure all guide women to decide what she might do. But also we should give an opportunity to the adolescent to discuss their reproductive needs and contraception without the presence of the parents or guardian. Husband or male partner should be involved in discussions to enhance the sense of mutual responsibility. Lack of laws or their

enforcement to prevent early marriage, particularly for girls is another factor for reluctance of parents to give marriage to adolescents. Once married, women are dependent on others.

Access of safe abortion services & post abortion care with contraceptive advice are important to strengthen the adolescent's contraceptives services delivery.

ASRH(Adolescent sexual reproductive health) low priority in Political level Various Societal, cultural & religious factors create an inhibitive environment to discuss ASRH which includes adolescents contraceptives.

Unmarried adolescents are at particular risk of experiencing negative attitudes from parents, teachers and health-care providers.

Sometimes even married adolescents face unsupportive attitudes from health-care providers when they seek information.

Contraceptive methods recommended for adolescents are

1. Barrier methods
2. Low-dose combined oral contraceptives (COCs)
3. Progestogen-only pills (POPs)
4. Progestogen-only injectables
5. Progestogen-only implants
6. Intrauterine devices (IUDs)
7. Emergency contraceptive
8. Natural family planning/fertility awareness based methods Withdrawal
9. Male and female sterilization – Usually not recommended.

Combined oral contraceptives

Combined oral contraceptive pills that contain both estrogen and progestins are widely available, but the contraceptive patch, and the vaginal ring may not be available everywhere. The pregnancy rate with these methods is 9 percent per year in typical patients. Non-contraceptive benefits of combined hormonal contraception are very important, If the benefits are disseminated to the adolescents, compliance will be more. OCP improves bone density and protect against ovarian cancer, endometrial cancer, salpingitis, ectopic pregnancy, benign breast disease, acne, and iron deficiency [10].

Absolute contraindications to estrogen-progestin contraceptives include [11]:

- Multiple risk factors for arterial cardiovascular disease (eg, older age, smoking, diabetes, hypertension, low HDL cholesterol, high LDL cholesterol, high triglycerides)
- Uncontrolled Hypertension
- Known thrombophilia and thrombogenic mutations including antiphospholipid syndrome and factor V Leiden; prothrombin mutation; protein S, protein C, and antithrombin deficiencies
- Deep vein thrombosis (DVT) and pulmonary embolism (PE) (past history of DVT/PE and not taking anticoagulant therapy or DVT/PE and taking anticoagulant therapy for ≥ 3 months) omplicated valvular heart disease
Migraine with aura
- Breast cancer
- Drug interactions such as certain antiretroviral therapies, anticonvulsant medications, rifampin

Fortunately Adolescents are not having much contraindication because of their young ages. So they may use it for long time. Many adolescents, who wish to avoid monthly periods for medical or lifestyle reasons may choose to follow a schedule that involves continuous estrogen-progestin pills for 84 days followed by a week of pill-free days.

Non contraceptive Health Benefits of Oral Contraceptives

Increased menstrual cycle regularity, decreased incidence of Dysmenorrhea, Iron-deficiency anemia, AUB, Premenstrual syndrome, decreased incidence of benign breast disease, pelvic inflammatory disease and sequel, including ectopic pregnancy, functional ovarian cysts, acne and severity. Also decreased risk of ovarian cancer, endometrial cancer, colon cancer and Improve bone density.

Barrier Methods

Spermicidal foams, jellies, creams, films and suppositories; male condom; female condom, diaphragm; contraceptive sponge, and cervical cap but these are not very effective and other methods of contraception- periodic abstinence [ie, the "calendar rhythm" method], withdrawal) are less effective because they require action on the part of the adolescent and/or partner at the time of sexual activity so better to avoid.

LARC (Long acting reversible contraceptives) methods are the most effective reversible methods of contraception; once they have been inserted they do not require regular action on the part of the adolescent. They are considered first-line options for adolescents by the AAP [12,13] and the ACOG [14,15].

"IUDs are completely reversible contraceptive methods placed in the uterus. There are two types of IUDs. One is hormonal and lasts up to three or five years. The other is non-hormonal; it releases copper and can last up to 10 years. Either type can be removed at any time if they wish to become pregnant or want to switch to a new method. They are very safe and have the highest satisfaction.

The pregnancy rate is <1 percent per year in typical patients, and slightly higher in women younger than 25 years [16,17]. Fertility returns quickly after removal.

There are relatively few absolute contraindications to intrauterine contraception. These include severe distortion of the uterine cavity, active pelvic infection, known or suspected pregnancy, Wilson disease (for the copper IUD), unexplained vaginal bleeding.

Contraceptive implant - The etonogestrel contraceptive implant is an attractive option for adolescents who desire long-term, uninterrupted contraception [18,19]. Unexpected and prolonged vaginal bleeding is a common side effect and can trigger request for premature removal.

Depot medroxyprogesterone acetate - (DMPA) is an injectable progestin-only contraceptive that provides effective, private, reversible contraception for three months.

Absolute contraindications to DMPA, [20]:

Multiple risk factors for cardiovascular disease, older age, smoking, diabetes, hypertension, high-density-lipoprotein [HDL], high triglycerides, heart disease. Most of which are unlikely in adolescents but return of fertility is delayed with use of DMPA.

Physical or intellectual disability - Adolescents with physical disability may have difficulty with menstrual hygiene. For such

adolescents, hormonal contraception (eg, LNG IUD, DMPA, the contraceptive patch, or continuous or extended cycles of combined oral contraceptive pills) may be considered [21]. The intellectually disabled adolescent should have access to contraception under the supervision of a parent or guardian.

Postpartum or postabortion - Contraception for adolescents during postpartum or postabortion is very important opportunity to discuss and implement.

PREINITIATION COUNSELING & STI prevention is important aspect for Adolescents. Husband and male partners need to accompany during the discussion.

Emergency contraception - Adolescents who choose methods of contraception other than an intrauterine device or a contraceptive implant should be educated about the availability of and indications for emergency contraception in the event of a gap in contraceptive use or a method failure [22]. This is particularly true for adolescents who require medical treatments that may be teratogenic to the fetus (eg, isotretinoin) or in whom pregnancy would severely compromise health (eg, severe mitral stenosis, symptomatic aortic stenosis, Eisenmenger syndrome) [23].

Conclusion

Adolescents needs special attention by Health & FP (Family planning) sectors

AFHS should focus comprehensive services for adolescent

Focused FP services through AFHS are needed for married adolescents.

FP Counseling needs to be incorporated into adolescent services

Full information with proper counseling and easy access for contraceptives need to be available on SRH-FP.

Support needed to integrate MCH (Maternal child health & FP services).

Adolescent friendly hospital should provide confidential, personalized, adolescent's friendly service, taking into account of adolescent's psychosocial & sexual needs.

Ethics approval and consent to participate

Ethical permission was taken from the ethical board of Z H Sikder women's medical college and hospital.

List of abbreviations

USA (United States of America)

HCP (health care providers)

ASRH (Adolescent sexual reproductive health)

DVT (Deep vein thrombosis)

PE (pulmonary embolism)

LARC (Long acting reversible contraceptives)

ACOG (American college of Obstetrics & Gynaecology)

AUB (Abnormal uterine bleeding)

AFHS (Adolescent friendly hospital service)

"IUD (Intrauterine device)

DMPA (Depot medroxyprogesterone acetate)

HDL (high-density-lipoprotein)

LNG (Levonorgestrel)

Data Availability

WebMD, PubMed, Up-to-date, RCOG, FIGO, WHO

Conflicts of Interest

NO Interest of Conflict

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Authors' contributions

As it is review article so no specific data the co-authors provided. They helped in search of information's regarding adolescent's contraceptives.

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