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CONTRACEPTIVE CHOICE IN ADOLESCENTS: PERCEPTION AND ACCEPTANCE OF THE ETONOGESTREL IMPLANT

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Abstract: INTRODUCTION The introduction explores adolescent contraceptive needs and preferences, focusing on the rise of long-acting reversible contraceptives (LARCs), particularly the etonogestrel implant. The text discusses global trends in contraceptive use, the role of healthcare providers in counseling adolescents, and the importance of addressing social, cultural, and psychological factors that influence contraceptive decisions. **OBJETIVE** To analyze the perception, acceptance, and barriers related to the use of the etonogestrel implant among adolescents, highlighting factors such as social influences, access, and long-term continuation rates. **METHODS** This is a narrative review which included studies in the MEDLINE – PubMed (National Library of Medicine, National Institutes of Health), COCHRANE, EMBASE and Google Scholar databases, using as descriptors: "Etonogestrel Implant" AND "Adolescent Contraception" OR "Long-Acting Reversible Contraceptives" OR "Contraceptive Access" OR "Reproductive Autonomy" in the last years. **RESULTS AND DISCUSSION** The results examine adolescent contraceptive use patterns, showing how provider recommendations, peer influences, and educational programs affect acceptance of the etonogestrel implant. The section highlights barriers to access, including socioeconomic and cultural factors, and evaluates continuation rates, side effect concerns, and the psychological impact of the implant on adolescents. **CONCLUSION** The conclusion emphasizes the benefits of the etonogestrel implant as a reliable contraceptive option for adolescents but underscores the need for improved access, better counseling, and continued efforts to reduce stigma. It calls for public health initiatives to promote informed decision-making and equitable access to long-acting contraceptives, with an eye toward future innovations in reproductive healthcare for adolescents.

Keywords: Etonogestrel Implant; Adolescent Contraception; Long-Acting Reversible Contraceptives.

INTRODUCTION

Adolescents face unique reproductive health needs and challenges, which play a crucial role in shaping their contraceptive preferences[1]. This developmental phase is marked by significant physical, emotional, and social changes that influence their decisions related to contraception[1]. Adolescents' contraceptive needs are often driven by a desire to prevent unintended pregnancies while balancing concerns about side effects, accessibility, and autonomy[1]. Unlike older populations, adolescents may not prioritize the same factors when selecting contraceptive methods[2]. Long-term effectiveness and reversibility are key considerations for them, while privacy and ease of use significantly impact their choice[2]. Consequently, long-acting reversible contraceptives (LARCs), such as the etonogestrel implant, have emerged as important options that align with these needs[2].

Globally, trends in adolescent contraceptive use reflect significant variability influenced by geographic, cultural, and socioeconomic factors[3]. In many developed countries, the use of LARCs has increased in recent years, driven by public health initiatives aimed at reducing unintended adolescent pregnancies[3]. However, in developing nations, barriers such as limited access to healthcare, cultural stigmatization of contraception, and poor sexual education programs hinder widespread adoption of these methods[3]. While traditional methods like condoms and oral contraceptives continue to dominate, there is a gradual shift towards LARCs, including the etonogestrel implant[4]. This trend highlights the growing recognition of LARCs as essential tools in preventing unintended pregnancies among

adolescents[4]. Yet disparities in access and acceptance persist, particularly in regions with limited healthcare infrastructure or restrictive social norms[4].

The role of LARCs in adolescent contraception cannot be understated[5]. LARCs, including intrauterine devices (IUDs) and subdermal implants, such as the etonogestrel implant, provide long-term, reliable contraception without the need for daily adherence[5]. This feature is particularly beneficial for adolescents, who may struggle with the consistent use of short-term methods like oral contraceptives[5]. Numerous studies have demonstrated that LARCs are more effective than other contraceptive methods due to their low failure rates and minimal user dependency[6]. The introduction of LARCs has been pivotal in shaping contraceptive strategies for adolescents, contributing to a decline in adolescent pregnancy rates in countries where access to these methods is facilitated[6].

When comparing the etonogestrel implant to other LARCs, it is important to consider factors such as efficacy, user satisfaction, and side effect profiles[7]. Studies have shown that the etonogestrel implant is highly effective, with a failure rate of less than 1%, similar to that of intrauterine devices (IUDs)[7]. However, unlike IUDs, which require insertion into the uterus, the implant is inserted into the arm, making the procedure less invasive and more acceptable to some adolescents[8]. While IUDs provide longer-lasting contraception, the implant's three-year duration is often considered adequate for many adolescents, particularly those who are unsure of their long-term reproductive plans[8].

Healthcare providers play a pivotal role in guiding adolescent contraceptive choices[9]. Adolescents often rely on the expertise and recommendations of their healthcare providers when selecting a contraceptive method[9]. Effective counseling involves providing comprehensive information about all available contraceptive options, including the benefits and potential risks associated with each method[9]. Providers must also consider the unique needs and preferences of adolescents, ensuring that they feel supported in making informed choices[10]. In the case of the etonogestrel implant, healthcare providers must address common misconceptions, such as concerns about side effects, weight gain, or future fertility, which may deter some adolescents from choosing this method[10].

Adolescent perceptions of hormonal contraception are shaped by a variety of factors, including personal experiences, peer influences, and societal attitudes[11]. Many adolescents express concerns about the hormonal nature of contraception, often fearing side effects such as weight gain, mood changes, or acne[11]. These concerns can significantly impact their willingness to use methods like the etonogestrel implant[11]. Furthermore, misinformation and misconceptions about hormonal contraception, particularly regarding its impact on future fertility, are common among adolescents[12]. Addressing these perceptions through targeted education and counseling is essential in promoting the acceptance and use of hormonal methods, including the implant[12].

Family and peer influences are critical factors in adolescent contraceptive decision-making[13]. Adolescents often look to their families and friends for guidance when making health-related decisions, including the use of contraception[13]. In some cases, parental approval or disapproval can significantly impact an adolescent's willingness to seek out or use contraceptives[13]. Similarly, peer influence plays a pivotal role in shaping an adolescent's decision to use contraception, particularly in environments where discussions about sexual health may be limited or stigmatized[14]. Friends and peers may provide informal advice and share personal experiences that influence perceptions of different contraceptive methods, including the etonogestrel implant[14].

Psychological and emotional factors are equally important in shaping contraceptive choices among adolescents[15]. The decision to use contraception, particularly long-acting methods such as the etonogestrel implant, may provoke concerns about bodily autonomy, the implications of sexual activity, and long-term health effects[15]. Adolescents may experience anxiety about the invasiveness of the insertion process or fear potential side effects such as weight gain, mood changes, or alterations in menstrual patterns[16]. These concerns are often compounded by the uncertainty many adolescents feel about their reproductive futures, with some expressing worry about the reversibility of hormonal contraception[16].

The safety and efficacy of the etonogestrel implant in adolescents are well-established in the medical literature[17]. Numerous studies have demonstrated that the implant is not only highly effective in preventing pregnancy, with failure rates comparable to or lower than other LARCs, but also safe for use in adolescents[17]. The implant's progestin-only formulation avoids the risks associated with estrogen-containing contraceptives, such as thromboembolism, making it a suitable option for a broad range of users, including those with contraindications to estrogen[18]. Additionally, the implant's three-year duration of action provides extended protection with minimal need for follow-up care, making it particularly attractive for adolescents who may have difficulty maintaining regular healthcare appointments[18].

Side effects and concerns associated with the etonogestrel implant are a common reason why some adolescents may hesitate to choose this method[19]. Irregular bleeding, the most frequently reported side effect, can be distressing for some users and may lead to early discontinuation of the implant[19]. Other potential side effects include changes in mood, weight gain, and acne, although these effects vary widely among individuals[19]. It is crucial for healthcare providers to thoroughly discuss these potential side effects with adolescents before implantation, providing reassurance that most side effects diminish over time and that the method remains highly effective despite these issues[20]. Ethical considerations in adolescent contraceptive care are multifaceted and require careful navigation by healthcare providers[21]. Issues of autonomy, confidentiality, and consent are particularly salient in this population, as adolescents may seek contraception without parental involvement or approval[21]. While many jurisdictions allow adolescents to access contraception confidentially, some require parental consent for LARC insertion, including the etonogestrel implant[21]. This requirement can create barriers for adolescents who may fear disclosing their sexual activity to their parents or guardians[22].

OBJETIVES

To analyze the perception, acceptance, and barriers related to the use of the etonogestrel implant among adolescents, highlighting factors such as social influences, access, and long-term continuation rates.

SECUNDARY OBJETIVES

1. To evaluate the role of healthcare providers in influencing the choice and acceptance of the etonogestrel implant.
2. To examine the impact of educational interventions and public health programs on the usage of LARCs in adolescents.
3. To investigate how social, cultural, and psychological factors affect adolescent contraceptive choices.
4. To assess the long-term outcomes of using the etonogestrel implant, including satisfaction and side effect management.

METHODS

This is a narrative review, in which the main aspects of the perception, acceptance, and barriers related to the use of the etonogestrel implant among adolescents, highlighting factors such as social influences, access, and long-term continuation rates in recent years were analyzed. The beginning of the study was carried out with theoretical training using the following databases: PubMed, sciELO and Medline, using as descriptors: "Etonogestrel Implant" AND "Adolescent Contraception" OR "Long-Acting Reversible Contraceptives" OR "Contraceptive Access" OR "Reproductive Autonomy" in the last years. As it is a narrative review, this study does not have any risks.

Databases: This review included studies in the MEDLINE – PubMed (National Library of Medicine, National Institutes of Health), COCHRANE, EMBASE and Google Scholar databases.

The inclusion criteria applied in the analytical review were human intervention studies, experimental studies, cohort studies, case--control studies, cross-sectional studies and literature reviews, editorials, case reports, and poster presentations. Also, only studies writing in English and Portuguese were included.

RESULTS AND DISCUSSION

Current statistics on adolescent contraceptive use demonstrate a complex landscape shaped by a range of individual, social, and systemic factors[23]. While LARCs have been shown to be highly effective in reducing unintended pregnancies, their uptake among adolescents remains variable[23]. Data from several studies suggest that while awareness of LARCs, including the etonogestrel implant, is increasing, many adolescents still rely on short-term methods, such as oral contraceptives and condoms[23]. This trend is particularly pronounced in regions where access to healthcare services is limited or where cultural norms stigmatize contraceptive use among young people[24]. In countries with robust healthcare systems and comprehensive sexual education programs, however, the use of LARCs is on the rise[24].

The influence of healthcare provider recommendations on the uptake of the etonogestrel implant cannot be overstated[25]. Adolescents are often heavily reliant on the guidance of their healthcare providers when making decisions about contraception[25]. Providers who offer clear, nonjudgmental, and evidence-based information about the implant are more likely to see higher acceptance rates among their adolescent patients[25]. In contrast, healthcare providers who fail to adequately discuss LARC options or who allow personal biases to influence their counseling may inadvertently contribute to lower uptake of these methods[26]. Studies have shown that when healthcare providers actively promote LARCs, including the etonogestrel implant, as a first-line contraceptive option, adolescents are more likely to choose these methods[26].

Comparative acceptance rates of the etonogestrel implant versus other contraceptive methods reveal that while the implant is gaining traction, it still faces competition from more traditional methods[27]. Oral contraceptives and condoms remain popular choices among adolescents due to their perceived familiarity and ease of use[27]. However, the high failure rates associated with these methods, particularly when not used consistently, highlight the need for greater promotion of LARCs as more reliable alternatives[27]. Acceptance rates of the etonogestrel implant are significantly higher in settings where comprehensive contraceptive counseling is provided, and where adolescents are educated about the long-term benefits of LARCs[28].

Importantly, the convenience of the implant, which requires no daily maintenance, appeals to adolescents who may struggle with adherence to other methods[28]. Perceptions

of the etonogestrel implant's effectiveness play a major role in its acceptance among adolescents[29]. Many young people view the implant as a highly effective form of contraception, particularly when compared to methods that require regular user intervention[29]. However, misconceptions about the implant's safety, potential side effects, and impact on future fertility can dampen enthusiasm for the method[29]. Adolescents who are concerned about irregular bleeding or hormonal changes may be hesitant to choose the implant, even though these side effects are generally mild and manageable[30].

The role of parental consent and involvement in contraceptive decisions adds another layer of complexity to the issue[31]. In some cases, parental involvement can facilitate access to contraceptives by providing financial support or accompanying adolescents to healthcare appointments[31]. However, in other cases, the requirement for parental consent can serve as a barrier, particularly for adolescents who fear judgment or disapproval from their parents[31]. This dynamic is especially relevant in the context of LARC use, where the insertion of the etonogestrel implant may require more invasive procedures than other methods[32]. Research indicates that when adolescents are able to access contraception confidentially, without the need for parental consent, they are more likely to choose LARCs[32]. This underscores the importance of policies that prioritize adolescent autonomy in reproductive health decisions[32].

Educational interventions play a crucial role in shaping adolescent contraceptive choices, particularly in relation to LARCs like the etonogestrel implant[33]. Programs that provide comprehensive, age-appropriate information about contraception have been shown to increase the acceptance and use of LARCs among adolescents[33]. School-based health programs, community outreach initiatives, and digital campaigns that focus on educating adolescents about the safety and efficacy of the implant can significantly improve uptake rates[33]. Additionally, interventions that involve parents and caregivers in the education process, while still respecting adolescent autonomy, can help to create a supportive environment for contraceptive decision-making[34]. These educational efforts must be culturally sensitive and tailored to address the unique concerns of adolescents from diverse backgrounds[34].

Satisfaction rates among adolescent users of the etonogestrel implant are generally high, particularly among those who have received adequate counseling and support[35]. Many adolescents appreciate the implant's convenience and effectiveness, with studies showing that satisfaction levels tend to increase over time as users become accustomed to the method[35]. However, some adolescents may experience dissatisfaction due to side effects such as irregular bleeding, which can lead to early discontinuation of the implant[35]. Healthcare providers play a critical role in managing these side effects through ongoing counseling and support, ensuring that adolescents are aware of strategies to mitigate any discomfort they experience[36].

CONCLUSION

The etonogestrel implant represents a highly effective, long-acting reversible contraceptive option that addresses the unique reproductive health needs of adolescents. Its high efficacy, ease of use, and low maintenance requirements make it particularly well-suited for young people who may struggle with adherence to short-term contraceptive methods. However, its acceptance and continued use among adolescents are influenced by a range of factors, including individual perceptions of side effects, peer and family influences, cultural norms, and socioeconomic status.

Healthcare providers play a critical role in guiding adolescents through the decision-making process, offering comprehensive, evidence-based counseling that addresses concerns and dispels misconceptions.

While the etonogestrel implant offers significant benefits, including reduced rates of unintended pregnancies and high levels of user satisfaction, challenges remain in ensuring equitable access to this method. Barriers such as cost, limited availability of trained healthcare providers, and cultural stigma must be addressed through targeted public health initiatives and policy changes. Increasing access to the implant, particularly in underserved communities, requires a multifaceted approach that includes expanding telemedicine services, enhancing school-based health programs, and engaging adolescents in peer-led education initiatives.

Looking ahead, the continued promotion of the etonogestrel implant and other LARCs among adolescents will depend on innovations in contraceptive technology and healthcare delivery. Efforts to reduce stigma, improve access, and provide comprehensive education about LARCs will be essential for ensuring that adolescents can make informed choices about their reproductive health. By fostering a supportive environment that prioritizes adolescent autonomy and access to confidential healthcare, we can help ensure that all young people have the opportunity to achieve their reproductive health goals, free from the constraints of unintended pregnancy or the barriers posed by inadequate contraceptive access.

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