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Review article

Contraception for adolescents with chronic rheumatic diseases

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ABSTRACT

Contraception is an important issue and should be a matter of concern in every medical visit of adolescent and young patients with chronic rheumatic diseases. This narrative review discusses contraception methods in adolescents with juvenile systemic lupus erythematosus (JSLE), antiphospholipid syndrome (APS), juvenile idiopathic arthritis (JIA) and juvenile dermatomyositis (JDM). Barrier methods are safe and their use should be encouraged for all adolescents with chronic rheumatic diseases. Combined oral contraceptives (COC) are strictly prohibited for JSLE and APS patients with positive antiphospholipid antibodies. Reversible long-acting contraception can be encouraged and offered routinely to the JSLE adolescent patient and other rheumatic diseases. Progestin-only pills are safe in the majority of rheumatic diseases, although the main concern related to its use by adolescents is poor adherence due to menstrual irregularity. Depot medroxyprogesterone acetate injections every three months is a highly effective contraception strategy, although its long-term use is associated with decreased bone mineral density. COC or other combined hormonal contraceptive may be options for JIA and JDM patients. Oral levonorgestrel should be considered as an emergency contraception method for all adolescents with chronic rheumatic diseases, including patients with contraindication to COC.

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Contracepção para adolescentes com doenças reumáticas crônicas

Palavras-chave:
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Lúpus eritematoso sistêmico
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RESUMO

A contracepção é uma questão importante e deve ser um motivo de preocupação em toda consulta médica de pacientes adolescentes e jovens com doenças reumáticas crônicas. Esta revisão narrativa discute métodos contraceptivos em adolescentes com lúpus eritematoso sistêmico (LES), síndrome antifosfolipídica (SAF), artrite idiopática juvenil (AIJ) e dermatomiosite juvenil (DMJ). Os métodos de barreira são seguros e todos os adolescentes com doenças reumáticas crônicas devem ser incentivados a usá-los. Os contraceptivos orais combinados (COC) são estritamente proibidos para pacientes com LESJ e SAF com anticorpos antifosfolípides positivos. A contracepção reversível de ação prolongada pode ser incentivada e oferecida rotineiramente a paciente adolescente com LES e outras doenças reumáticas. As pílulas que contêm somente progestina são seguras na maior parte das doenças reumáticas, embora a principal preocupação relacionada com seu uso por adolescentes seja a baixa adesão em decorrência da irregularidade menstrual. As injeções de acetato de medroxiprogesterona de depósito a cada três meses são uma estratégia altamente eficaz de contracepção, embora o seu uso em longo prazo esteja associado à diminuição na densidade mineral óssea. Contraceptivos orais combinados ou outros contraceptivos hormonais combinados podem ser opções para pacientes com AIJ e DMJ. O levonorgestrel oral deve ser considerado como um método de contracepção de emergência para todas as adolescentes com doenças reumáticas crônicas, incluindo pacientes com contraindicação para COC.

Introduction

The prevalence of chronic diseases has been rising worldwide.[1] In fact, approximately 20% of American adolescents (12–17 years) have one current chronic disease and 13% have two or more current chronic diseases nowadays.[2]

Adolescents diagnosed with chronic illnesses and disabilities live longer now than in the past. Those individuals experience the enthusiasm of puberty, rapid growth, physiologic changes and are usually engaged in socialization processes, as any other adolescent. That said, the management of chronic diseases during this special period constitutes a major challenge for the individual, his/her family and the health-care team.

The first sexual intercourse has being occurring at earlier ages throughout the world.[3,4] Adolescents who initiate sexual activity early in life tend to have more sexual partners and are more prone to unintended pregnancies, since this behavior is generally associated with low frequency of contraceptive use.[4,5]

Although rates of teenage pregnancy have declined significantly in most countries during the last decades, a large number of pregnancies still occur in this age group. Around 16 million adolescent women (15–19 years old) give birth each year, approximately 11% of all births worldwide.[6] The 2014 World Health Statistics shows that the average global birth rate between 15 and 19 year olds is 49 per 1000 girls.[7]

Adolescents appear to be at higher risk for adverse pregnancy outcomes, such as low-birth-weight babies and infant deaths.[6,8–10] A multicountry study that included 124,446 mothers ≤24 years, revealed that the risk of adverse outcome remained increased in adolescent (≤19 years) compared to young mothers after controlling for country, marital status, education levels and parity.[10] Undesired pregnancies may end in abortions, which are usually unsafe in this age group.

Pregnancy in adolescents with chronic medical conditions has been rarely studied, although it is an important issue in clinical practice. Sexual desire is present in youth, independently the severity of a possible chronic illness.[11] Pregnancy can also be particularly risky in female adolescent with active disease or under teratogenic medication, making contraception an important issue for these women.

Despite adolescent contraception has become an important public health issue, most physicians are still not aware of the necessity to provide the right information and support pregnancy prevention.[12] Effective contraception is particularly important for adolescents with chronic diseases, since the consequences of an unwanted and unwished pregnancy can be devastating.

In adolescent with chronic autoimmune conditions, disease activity at the time of conception and the presence of antiphospholipid antibodies (aPL) are responsible for most complications. Disease flares, pre-eclampsia, and thrombosis constitute maternal complications in adolescent with systemic lupus erythematosus (SLE), whereas fetal loss, premature birth and intrauterine growth restriction are the main fetal complications. Teratogenic drugs, such as immunosuppressive agents, implies the use of contraceptives.[13]

A clear understanding of the best contraceptive methods available for adolescents with chronic conditions is essential to prevent unplanned pregnancies. Therefore, adolescent and young patients should be educated about their

rights to confidential reproductive health care, sexual function and contraceptive methods. Contraception should be discussed in each medical visit with adolescent and young patients. A recent study showed that approximately 30–55% of female patients in reproductive age with chronic inflammatory diseases reported that their concerns relating to family planning were not adequately addressed during their medical appointments.[14]

Cochrane Database study reviewed more then 41 trials (including more that 95,000 teens) and concluded that the combination of education and contraception promotion was highly successful in pregnancy prevention for adolescents.[15]

The most recent Youth Risk Behavior Surveillance in USA reported that 41% of high school students did not use a condom and 14% did not use any contraceptive methods during the last sexual intercourse.[16] Therefore, to take a daily pill may be challenging and other survey reported that teens are more than twice as likely to experience a pill failure as women aged more than 30 years.[17]

After the contraceptive choice, it is mandatory to evaluate prospectively the possible adverse events and adherence for this strategy. These are important issues and may be highlighted, particularly in adolescents with chronic diseases.

Eligibility Criteria for Contraceptive Use,[18] currently in its 5th edition (2015), is a document published by the World Health Organization (WHO) which includes scientific evidence to guide decision making on the safety of the use of various contraceptives in women with over than 60 medical conditions. In 2010, the Centers for Disease Control (CDC) also published a document for use in the USA, included other medical diseases not included in the WHO recommendations as bariatric surgery, solid organ transplant and other chronic diseases, such as inflammatory bowel disease and rheumatoid arthritis.[19] Both documents covers the current family planning methods.[17,18]

The both guidelines classified contraceptive methods for various diseases in 1–4 categories: category 1 includes diseases without risk to contraceptive use; category 2 includes some medical risk to contraceptive; category 3 risks usually outweigh contraceptive benefits and contraceptive methods are contraindicated in category 4.[18,19]

The objective of this article is a review regarding contraception for adolescents with chronic autoimmune diseases.

Methods

We performed a narrative review and conducted a series of literature searches in the database MEDLINE/PubMed for English language articles focusing on contraception in adolescents with rheumatic diseases. The search strategy included a combination of medical subject headings and keywords. The search terms that we used were "contraception", "adolescent", "combined oral contraceptive", "pediatric autoimmune diseases", "juvenile idiopathic arthritis" (JIA), "juvenile rheumatoid arthritis", "juvenile systemic lupus erythematosus" (JSLE), "childhood-onset systemic lupus erythematosus", "antiphospholipid syndrome" (APS) and "juvenile dermatomyositis". The search covered the period between 1970 and 2015 and included clinical studies, systematic reviews and animal studies. All articles selected for this manuscript were full-text or review papers.

Table 1 – Ten basic principles for choosing an appropriate contraceptive strategy for adolescents with rheumatic chronic diseases.

1.	Consider adolescent with rheumatic chronic disease as an individual with sexual desires, shaped by their condition and with sexual and reproductive rights
2.	Respect the bioethical principles of privacy in care and confidentiality of information
3.	Adopt a strategy of "dual protection" to prevention of pregnancy and sexually transmitted infections with condom
4.	Consider the practical effectiveness of each contraceptive method and understand the typical adolescent use (not the perfect use)
5.	Consider the eligibility criteria of each method for each clinical condition, consulting existing guidelines (WHO or CDC)
6.	Understanding the adverse effects of the methods, drug interaction and its possible interference in disease progression
7.	Consider accessibility and availability of contraceptive method in the health system and the cost of method.
8.	Assess the teenager's attitude towards the exercise of their sexuality, their questions and myths
9.	Encourage the presence and participation of the partner and the existence of family and/or social support network to the issue of contraception
10.	Develop strategies to the teenage couple. Healthy providers are encouraged to help the negotiation of contraceptive use with both partners

WHO, World Health Organization; CDC, Centers for Disease Control.

Table 1 includes the principles for choosing an appropriate contraceptive strategy for adolescents with rheumatic chronic diseases.

Contraception for juvenile systemic lupus erythematosus

JSLE is a chronic autoimmune disease that can involve any system and may lead to significant morbidity and mortality. Approximately 15–20% of SLE have disease before 18 years of age.[20] Sexually active adolescents with lupus are at high risk for pregnancy. In addition to psychosocial risks related to early pregnancy in the life of a teenager, risks for women with SLE include disease flares, obstetric and fetal complications, and adverse effects of medications on fetal development.[14]

A cohort of women with SLE reported a high risk for unplanned pregnancy, including many patients under teratogenic medications, 59% reported no contraceptive counseling within the past year and 53% used only barrier contraceptive methods.[21]

The majority of papers on contraception in SLE and other chronic diseases were performed in adults. To our

knowledge, there is no study of contraceptive methods for JSLE adolescents. This is a very important point to consider, since JSLE adolescents have a more severe disease course than adult-onset SLE. Therefore, they are prone to develop significant damage due to the disease, comorbidities and treatments.[22–24]

According to the WHO and CDC guidelines,[18,19] barrier methods for male contraception can be safely used by patients with SLE (category 1). The condom use should be reinforced for all male patients, especially under biological and immunosuppressive agents. Nonetheless, these methods have high failure rates when used as the single contraceptive method, especially in teenagers.[15] Thus, it is mandatory to indicate a more reliable method in conjunction with barrier methods to avoid pregnancy.

Regarding hormonal therapies, one of the concerns about combined oral contraceptives (COC) to SLE patients is that estrogen seems to play a major role in lupus pathophysiology. JSLE often occurs in post-pubertal adolescent, supporting the notion that SLE can be induced by estrogen. Indeed, some autoimmune effects of estrogens have been related in vitro, such as enhanced T-cell resistance to apoptosis and increased levels of autoreactive B cells.[25,26]

Despite the common use of COC, many physicians are reluctant to prescribe this contraceptive to female SLE due to concerns that exogenous estrogens could provoke lupus flare. Another issue is that estrogen has been associated with either venous or arterial thrombosis.[27]

The SELENA (Safety of Estrogens in Lupus Erythematosus-National Assessment) trial studied 183 young adult female SLE patients, aged 18 years old or more, with inactive or stable disease. Previous history of thrombosis, positivity for anticardiolipin antibodies or lupus anticoagulant and hypertension were exclusion criteria. COC did not increase the incidence of severe or mild/moderate flares when compared to placebo. This study reinforced safety of COC for a subgroup of female SLE who had mild, stable disease and without antiphospholipid antibodies.[28]

Sanchez-Guerrero et al.[29] studied 162 adult women with SLE in three different groups to evaluate the influence of contraceptive methods (COC, progestin-only pill or copper intrauterine device). There were no differences between these groups in disease activity. During the study four patients had thrombotic events, two in the COCs group and two in the progestin-only pill group.

Association between COC use and venous thrombosis had been reported.[30] WHO and CDC guidelines suggest that COCs in the presence of antiphospholipid antibodies are strictly prohibitive for SLE patients (category 4). On the other hand for other SLE patients, even those with severe thrombocytopenia or immunosuppressive treatment, this method is classified as category 2. It is important to note that for all categories of SLE, classifications are based on the assumption that no other risk factors for cardiovascular disease are present and these classifications must be modified in the presence of such risk factors.[18,19] COC prescription is contraindicated for arterial hypertension (systolic >160 or diastolic >100 mmHg) (category 3).[18,19]

Mature adolescents with SLE with negative antiphospholipid antibodies, who are nonsmokers, with neither family nor personal history of thrombosis and with the disease controlled, without renal involvement, may be eligible for COC. To minimize the risk of thrombotic events, a low-estrogen formulation should be chosen.[31,32] Nevertheless, the majority of adolescents with lupus do not present all the previous characteristics, therefore they are not good candidates for estrogen-containing contraception, and other alternatives should be considered.[31,32]

Regarding progestin contraceptive, Mintz et al.[33] reported progestogen use in SLE patients, either intramuscular norethisterone enanthate or oral levonorgestrel. These contraceptives were considered tolerable methods, in spite of 30% of the patients had experienced intermenstrual bleedings, which led to medication withdrawal.[33] In addition, Julkunen et al. also observed high withdrawal rates (78%) of progestin-only pill (POP) preparation in SLE patients due to poor gynecological tolerance, seemingly vaginal bleeding.[34]

A large retrospective study with more than 74,000 women that received progestogen presented augmented risks of thrombosis. However, the relative risk was much higher in women who used progestogens due to another indication, but not as a contraception methods.[35] Research addressing thrombotic risk of progestin-only methods in high risk populations are not available.

WHO recommends that POP are safe in the majority of SLE patients, even in the presence of severe thrombocytopenia or immunosuppressive drugs (category 2). If a patient has positive antiphospholipid antibodies, the method is classified as category 3.[18] The main concern related to the use by adolescents is poor adherence due to menstrual irregularity.

Depot medroxyprogesterone acetate (DMPA) injections, every three months, is a highly effective contraception method. However, it has been observed that long-term use of DMPA is associated with decreased bone mineral density (BMD), although with no known association with fracture risks. The decrease in BMD in healthy adolescents may not be clinically significant, nevertheless for a teenager with lupus, who have an increased risk of osteopenia due to either disease itself or chronic glucocorticoid use, it might be a concern.[32] Supplementation of calcium and vitamin D is required for adolescents under DMPA.[36]

More recently, an implantable device with etonogestrel (subdermal implant), another progestin-only contraceptive method, can be an option for female SLE. Menstrual irregularities are described, although this implant does not appear to have an effect on BMD. This method is classified in WHO guideline with the same categories for DMPA.

Long-acting reversible contraception (LARC) includes intrauterine devices (IUDs) and subdermal implant. Although these methods are considered as one of the most effective reversible contraception strategies, traditionally are not offered routinely to the adolescent population. This concept, however, has been modified in recent years. Approximately 4.5% of American girls 15–19 years use some of these methods, mostly the IUDs.[37] Recently, the American College of Obstetricians and Gynecologists, the American Academy of Pediatrics, the Center for Disease Control (CDC) and the WHO indicate the potential impact of adopting these methods in controlling unplanned pregnancies, stating their safety and the lack of future repercussions on fertility of women.[38]

In addition to the contraceptive benefits, the use of LARC ensure optimal rates of adherence, an important parameter to be considered, particularly in adolescents with chronic diseases. Studies have demonstrated high rates of continuation of use with these methods, surpassing 85% over 12 months both in younger women and older.[39] This method combined with the use of condoms are also relevant to reduce risk of sexually transmitted diseases and HIV infection. Current evidence is that IUDs are safe. The relative risk of pelvic inflammatory disease is increased only in the first 20 days following the device insertion, equaling the baseline population after this period.[40] The IUDs with progestin may decrease the pelvic inflammatory disease risk because the thickening of the cervical mucus and endometrial thinning. Pelvic infections were not observed in adult SLE patients, neither hemorrhagic complications with this method.[29,34]

According to the WHO, the benefit of using copper IUD (Cu-IUD) and levonorgestrel-IUD (LNG-IUD) in women with SLE under immunosuppressive treatment usually outweighs the risks (category 2), except for patients with severe thrombocytopenia (category 3 for Cu-IUD and 2 for LND-IUD). LNG-IUD for patients with antiphospholipid antibodies has a high risk (category 3).[18]

Therefore, physicians should be considering long-acting reversible and highly-effective contraception, such implants and intrauterine devices, for appropriately selected adolescents with SLE.

Contraception for antiphospholipid syndrome

APS is an autoimmune disorder characterized by the presence of antiphospholipid antibodies and thrombosis. It may occur as an isolated clinical entity or in association with other diseases, mainly SLE.

Lakasing and Khamashta[41] found seven thrombotic episodes in 32 COC users (22%) in non-pregnant women with APS without any additional risk factors. This is more than twice the risk of thrombosis in non-pregnant women with APS, without any additional risk factors. These data suggest that women with APS should not use this form of contraception.

Some authors have observed an increased prevalence of antiphospholipid antibodies in healthy women during COC therapy, predominantly at the expense of anti-β2-glycoprotein I IgG class.[42]

In a randomized study of Sanchez-Guerrero et al.,[29] women who used combined or progestin-only oral contraception had the same rate of thrombosis (2 of 54 patients in each group), and all 4 patients with thrombosis had low titers of antiphospholipid antibodies.[29] Asherson et al. [43] described 10 patients with aPL developing vascular complications while taking COCs.

APS is a well-characterized prothrombotic condition. Nevertheless, physicians' ability to predict the risk of thromboembolic phenomena for an asymptomatic antibody-positive individual is still limited. The association between high dose of estrogen and venous thromboembolism has been known for decades and some studies show that estrogens and progestogens are thought to be important in the pathogenesis of arterial thrombosis.[27,31,32] Therefore, use of COC exerts an additive effect on the risk of thrombosis in these patients, many of them might not be aware of their genetic phenotype. The combination of antiphospholipid antibody and genetic prothrombotic risk factors increases the risk of thrombosis. Even though this increase in risk, routine screening in patients without a personal or family history of thrombosis before starting COC is not recommended.[18] It is reasonable to assume that the frequency of thrombosis in women taking hormonal contraception is increased if there is already a predisposition to thromboembolic disease, especially in women with underlying thrombophilias (congenital or acquired) and additional risk factors.

Other risk factors for arterial events, like complicated migraines, atherosclerosis or hyperlipidemia, might be increased in SLE patients with antiphospholipid antibodies, and could also increase risk of stroke or myocardial infarction. As a result, substantial concern has been expressed regarding the prescription of COC to such women. It seems reasonable to avoid COC in all patients with positive antiphospholipid antibodies.[43–46]

Recent systematic review and meta-analysis was conducted to evaluate the risk of venous thromboembolic events associated with the use of progestin-only contraception. The summary measure for the adjusted relative risk of a venous thromboembolic episode for users versus non-users of a progestin-only contraceptive was, based on the random effects model, 1.03 (95% CI 0.76–1.39). Subgroup analysis confirmed there was no association between venous thromboembolic risk and POP or a progestin intrauterine device.[46]

The WHO guideline considers the use of progestogen-only pills for SLE, category 3 for patients with positive antiphospholipid antibodies, similar to the CDC guideline.[18,19]

DMPA could be a therapeutic alternative to COC in adolescents with antiphospholipid antibodies, since progestin only contraceptives are associated with a lower, if not absent, risk of venous thromboembolic disease.[47] DMPA may cause reversible osteoporosis and the fertility could be delayed after discontinuation. The WHO guideline considers initiation or continuation of DMPA for SLE, category 3 for patients with positive antiphospholipid antibodies.[18] Similarly, the CDC guideline considers as a category 3 the start of DMPA for SLE with antiphospholipid antibodies (or unknown), as well as the continuation of the method.[19]

Other authors also reported the safety of DMPA for contraception in females with antiphospholipid antibodies.[48] In addition, women with APS under warfarin should have ovulation suppressed with intramuscular DMPA to decrease severe hemorrhagic corpus luteum complicating anticoagulation. Hemorrhagic site reaction was not observed with this contraceptive using this route of administration.[49]

A notable decrease in menstrual blood flow is seen with medroxyprogesterone acetate and the levonorgestrel-releasing intrauterine system IUDs which might be particularly beneficial in patients receiving treatment with warfarin.[50]

In summary, the use of COC should be contraindicated in adolescents with APS, given the increased thrombotic risk.

Compounds of progestins and IUDs should be used with caution, mainly in anticoagulated adolescents and with risk of reduction BMD.

Contraception for other chronic rheumatic diseases

To our knowledge, there was no study regarding safety and efficacy of contraception in juvenile idiopathic arthritis population. Britto et al.[51] studied adolescent risky behaviors, including sexual activities, in 178 patients with pediatric-onset rheumatic diseases, 69% of them had JIA. Sixty percent of the females were sexually active and 41% were using condoms as the only contraceptive method.

Moreover, a recent Australian study showed higher rates of maternal morbidity, pre-eclampsia and postpartum hemorrhage in JIA patients.[52] Therefore, it is of the utmost importance to inform the need of contraceptive methods to avoid unplanned pregnancies. Rheumatoid arthritis (RA) was added as a new condition specific to the USA context in the CDC adaptation of the medical eligibility criteria for contraceptive use from WHO.[19] According to this guideline, the use of combined hormonal contraceptive for rheumatoid arthritis (with or without immunosuppressive therapy) is category 2. CDC recommends that POP is safe in RA patients (category 1); DMPA is considered category 2/3 in patients on immunosupressive therapy. LARC (LNG-IUD and Cu-IUD) is a good option for rheumatoid arthritis patients (category 1) without immunosuppressive treatment; is considered category 2 for initiation and category 1 for continuation in patients on immunosuppressive treatment.[19] JIA was not included in the WHO guidelines. Patients with JIA, especially under immunosuppressive treatment, may possibly use contraceptive recommendations such rheumatoid arthritis. However further studies regarding safety and efficacy of contraception in JIA patients will be necessary.

The risk of pregnancy loss and prematurity have been reported in patients with inflammatory myopathies.[53] However, to our knowledge, there was no study regarding safety and efficacy of contraception in juvenile dermatomyositis population. The WHO and CDC guidelines did not include contraception for dermatomyositis.

Emergency contraception

Although the eligibility criteria for contraceptive methods prescription from WHO[18] and CDC[19] discuss the use of combination pills or others non-hormonal methods for some clinical conditions, the emergency contraception (EC) was not included in these recommendations.

EC with oral levonorgestrel is a well understood, ethically and technically legitimate mechanism for emergency situations, where no other protection method was used. It has no medical contraindications and therefore can be used in adolescents with rheumatic chronic diseases, including those with contraindication to COC.[54,55]

EC with oral levonorgestrel should be used after unprotected sex. It is effective when started less than 120 h after sexual activity.[54] To improve compliance, the single-dose levonorgestrel-only treatment is indicated.

Table 2 illustrates the contraceptive method recommendations and levels of evidence[56] for adolescents with rheumatic chronic diseases.

Table 3 shows contraceptive methods with absolute contraindication for adolescents with chronic rheumatic diseases.

Table 2 – Contraceptive method recommendations and levels of evidence for patients with chronic rheumatic diseases.

Rheumatic disease	First suggestion Barrier method (male or female condom) plus	Second suggestion Barrier method (male or female condom) plus	Commentary
SLE with negative antiphospholipid antibodies (aPL)	Copper-bearing IUD (A)[29,31] or levonorgestrel-releasing IUD (C)[18,38]	Combined oral contraceptive or progestogen-only pills for stable, mild disease activity (A)[28,29,31] or DMPA (C)[13]	In "contraceptive accidents" at risk of pregnancy (failure to use) we indicate emergency contraception (NS)
SLE with positive (or unknown) aPL/antiphospholipid syndrome	Copper-bearing IUD (NS) or Levonorgestrel-releasing IUD (C)[18]	Progestogen-only pills (B)[31,46] or DMPA[48,49]	
SLE with severe thrombocytopenia	Levonorgestrel-releasing IUD (C)[18]	Combined oral contraceptive for stable, mild disease activity (NS)	
Other diseases (juvenile idiopathic arthritis, juvenile dermatomyositis)	Combined oral contraceptive or other combined hormonal contraceptive (NS)	Long-acting reversible contraceptive (includes IUD or implant) (NS)	In "contraceptive accidents" at risk of pregnancy (failure to use) we indicate emergency contraception (NS)

IUD, intrauterine device; DMPA, depot medroxyprogesterone acetate; NS, no studies; level A, randomized controlled trial/meta-analysis; level B, well-designed, nonrandomized clinical trial and level; C, consensus/expert opinion.[56]

Table 3 – Contraceptive methods with absolute contraindication for adolescents with chronic rheumatic diseases.

Rheumatic disease	Contraceptive method with absolute contraindication
JSLE with positive (or unknown) antiphospholipid antibodies/antiphospholipid syndrome	Combined oral contraceptive Combined contraceptive patch Combined contraceptive vaginal ring Combined injectable contraceptive
JSLE with severe thrombocytopenia	Depot medroxyprogesterone acetate (DMPA) Copper-bearing intrauterine device (initiation) Levonorgestrel-releasing intrauterine device (initiation)
Juvenile idiopathic arthritis	None
Juvenile dermatomyositis	None

JSLE, juvenile systemic lupus erythematosus.

Conclusion

Adolescence is a period to consolidate identity, developing a positive body image, to establish social relationships and to achieve independence and sexual identity. Clinicians must understand that having pediatric rheumatic illness, even with disability, does not prevent their youth from being sexually active, becoming pregnant, or contracting sexually transmitted diseases. The prevention of teenage pregnancy is complex and dynamic and the population of young people with access to a reliable source of information, advice and support are better prepared to exercise a healthy and responsible sexuality. Based in our experience and to best adherence in young patients, we recommend that the contraceptive choice for rheumatologic chronic disease should be prescribed by their own rheumatologists and eventually with a gynecologist supervision.

Conflicts of interest

The authors declare no conflicts of interest.

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