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Trabajo Original

Use of contraception by Spanish women after delivery

Hábitos anticonceptivos tras el parto en las mujeres españolas

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Key words:

Long-acting reversible contraceptives (LARC). Levonorgestrel-releasing intrauterine devise (IUD-LNG). Pregnancy. Post-partum contraception.

Abstract

Objective: To study peripartum use of contraception in women taking long-acting reversible contraceptives (LARCs).

Material and methods: Observational, cross-sectional, multicenter, nationwide study of women of reproductive age (18-49 years) attending a gynecology clinic to request LARCs for the first time or to restart treatment.

Results: The study population comprised 1,660 patients (1,657 evaluable), with a mean (SD) age of 38.6 (5.7) years. Most already had children (1.9 [0.7] children/patient). During the previous 5 years, 44% of the patients had been pregnant; this was unintended in 10.3% of cases. The main contraceptive method used during the first year after the last delivery was the condom (42.7%), followed by oral contraceptives (16.2%), levonorgestrel-releasing intrauterine devices (7.5%), and the vaginal ring (6.5%). We found that 14.4% of women did not use any contraceptive method during the first year after delivery.

Conclusions: LARCs, which are highly effective and easy to apply, continue to be underused after delivery in Spain.

Palabras clave:

Anticonceptivos reversibles de larga duración (LARC). Dispositivo intrauterino liberador de levonorgestrel (DIU-LNG). Embarazo. Anticoncepción post-parto.

Resumen

Objetivo: estudio de los hábitos anticonceptivos alrededor del embarazo en mujeres que utilizan métodos anticonceptivos reversibles de larga duración.

Material y métodos: estudio observacional, transversal, multicéntrico y nacional, en mujeres en edad reproductiva (18-49 años) que acudían a la consulta ginecológica solicitando anticoncepción de larga duración por primera vez o para reiniciar tratamiento.

Resultados: se incluyeron 1.660 mujeres (1.657 válidas), con una edad de 38,6 ± 5,7 años, la mayoría de las cuales ya tenía hijos (1,9 ± 0,7 hijos/mujer). Un 44% de las pacientes tuvieron un embarazo en los últimos 5 años de los que el 10,3% no fue planificado. El principal método anticonceptivo utilizado durante el primer año después del último parto fue el preservativo (42,7%), seguido de los anticonceptivos orales (16,2%), el dispositivo intrauterino liberador de levonorgestrel (7,5%) y el anillo vaginal (6,5%). Un 14,4% de las mujeres no utilizaron ningún método anticonceptivo durante el primer año posparto.

Conclusiones: el uso de métodos anticonceptivos reversibles de larga duración, métodos de mayor efectividad y comodidad, están infrautilizados tras el parto.

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INTRODUCTION

Unintended pregnancy continues to be a major public health problem throughout the world (1-4). It also constitutes a considerable socioeconomic burden both for families and for society as a whole (4). More than half of all unintended pregnancies are in women who have used at least 1 type of contraceptive method (1,5,6). Therefore, every attempt should be made to help women and their partners choose the contraceptive method that best suits their preferences and needs (1).

Various studies have shown the patterns for use of contraceptives that increase the risk of unintended pregnancy (7,8), and the importance of long-acting reversible contraceptives (LARCs) in reducing the frequency of unintended pregnancy, termination, and recurrent miscarriage was recently demonstrated (8-11).

Therefore, the effectiveness of methods requiring greater intervention by the user (condom, pill, vaginal ring, and transdermal patch) is dramatically reduced (12). Misuse and problems with these methods are the main causes of unintended pregnancy, and, consequently, terminations in Spain (HAYA Study: Estudio sobre Hábitos Anticonceptivos y Aborto 2009 [Study on Contraceptive Use and Abortion, 2009], available at www.equipodaphne.es).

LARCs require occasional intervention by a health professional, with the user's involvement limited to a medical visit for insertion, administration, replacement, or withdrawal. Contraception is therefore considerably more effective, since user participation is minimal, and the method is less likely to fail owing to poor adherence. Thus, these methods stand out as the most effective forms of currently available reversible contraception (12-14).

The 4 types of LARCs marketed in Spain are the copper intrauterine device (Cu-IUD), the levonorgestrel-releasing intrauterine device (LNG-IUD or hormonal IUD), the subdermal etonogestrel implant, and the 3-monthly injection of depot medroxyprogesterone acetate.

Despite their greater effectiveness and ease of use, LARCs continue to be less common than other methods, such as the condom or combined hormonal methods (VII Encuesta de Anticoncepción en España 2011 [VII Survey on Contraception in Spain 2011], available at www. equipodaphne.es). In Spain, the frequency of LARC use is 5.6%, which is much lower than that of the condom (35.6%) and the pill (16.3%) (15,16).

Many authors suggest that after delivery, women are more receptive to and interested in contraceptive methods and have more access to information and gynecologic advice, thus facilitating their decision (17-22).

The postpartum period, when the woman has just given birth and is still hospitalized, provides a key opportunity to provide advice on contraception and change her habits towards a method that is safe and effective and associated with greater adherence (17,18,21).

In Spain, no data have been published to date on use of contraception, especially LARCs, before and after delivery.

Therefore, in order to evaluate the reasons why Spanish couples choose LARCs, we designed the present observational, cross-sectional study of women of reproductive age who visit their gynecologist requesting information on this method. Our objectives were to investigate the characteristics of women who had been pregnant during the previous 5 years and who had requested information on a LARC method. We also examined their use of contraception before pregnancy and after delivery.

In an initial subanalysis of women who chose LNG-IUD during the visit, we observed that the factors most influencing the users' choice—based mainly on information provided by their gynecologist—were effectiveness of the method (94%), long duration (62.5%), ease of use (61.3%), and safety (59.9%). They also valued additional benefits such as reduced bleeding (87.9%), amenorrhea (31.8%), and reduced menstrual pain (25.6%). We evaluated the use of contraception before and after pregnancy.

MATERIAL AND METHODS

Between February and June 2014, we performed an epidemiological, observational, cross-sectional study of women of reproductive age (18-49 years) who visited their gynecologist requesting long-acting contraception for the first time or to restart long-acting treatment under conditions of daily clinical practice in private gynecology clinics throughout Spain. The protocol, informed consent document, and all other information for patients were reviewed and approved by the Clinical Research Ethics Committee/Independent Ethics Committee of Hospital Universitario Puerta del Hierro, Madrid, Spain. The study was performed according to the principles of the Declaration of Helsinki and its subsequent revisions.

To be included, the participants had to be able to read, write, and understand the study, as well as give their written informed consent. We excluded women with contraindications for LARCs and women who had been prescribed a LARC for noncontraceptive medical use. We also excluded those women who, in the opinion of the investigator, were considered unsuitable for participation in the study and those who were participating in a clinical trial.

The objective of the present subanalysis of the study results was to investigate the characteristics of women who had been pregnant during the previous 5 years and who had attended the clinic to request LARCs. We also examined their use of contraceptives before and after delivery.

Sociodemographic data were collected at a single visit using the clinical history and a custom electronic case report form. The data included demographic data, mater-

nity, characteristics of pregnancy (intended/unintended), previous contraception (including methods used before pregnancy and after delivery, duration of use), and LARC prescribed (IUD, implant, injectable). All data were entered into an on-line database.

The statistical analysis was performed using SAS® Version 9.3 for Windows

RESULTS

Sociodemographic characteristics

A total of 1,660 women were recruited. Of these 1,657 (99.8%) were considered suitable for analysis. Of the 3 women excluded (0.2%), 2 (0.1%) were not prescribed a LARC during the study visit and 1 (0.1%) had difficulty reading, writing, and understanding the study.

Mean age was 38.6 (5.7) years, and most women were Spanish (93.5%), although a few were from South America (3.4%) or other European countries (2.2%). Most were living with a stable partner (89.6%) and were educated to secondary level (36.1%) or university level (51.9%) (10.2% were educated only as far as primary level) (Table I). During the study, 83.1% of women were working (employees, 64.4%; self-employed, 18.7%). Very few women were unemployed (8.6% had worked previously, and 0.2% were looking for their first job) or homemakers (7.1%).

Most of those surveyed (83.0%) reported having seen a health professional for advice on contraception or for a yearly gynecologic check-up. Very few women saw a health care professional less frequently (11.5% every 2 years; 2% every 3 years; 3.1% only when necessary).

A very high percentage of users had already had children (91.6%, with a mean of 1.9 [0.7] children per woman). As for the wish to become pregnant in the future, 78.7% did not wish to have more children, 13.7% had not yet decided, and only 7.6% wanted to wait a mean of 3.8 (1.8) years before having more children (median, 3 years) (Table I). The mean age of women who wished to have more children in the future was 31.2 (5.3) years.

Use of contraceptives

We found that 95.5% of women had experience with contraceptives, mainly the male condom (77.7%) and oral contraceptives (65.6%), followed by LNG-IUD (23.1%), Cu-IUD (18%), and the vaginal ring (17%).

Furthermore, 4.5% of women had never used contraceptives, the main reason being the desire to become pregnant (40.5%). However, 44.6% did not use any method, thus entailing a risk of unintended pregnancy.

Pregnancies during the previous 5 years

A pregnancy during the previous 5 years was recorded for 44% of the patients interviewed; of these, 88.9% were planned. Among the unintended pregnancies (10.3%), 6.6% were not wanted. In the remaining 3.7%, the women did not plan to have more children, yet they did not use contraception, since they did not mind becoming pregnant again (Fig. 1A).

In the case of women who had an unintended pregnancy, the main reason was failure of the contraceptive

Table I.
Sociodemographic characteristics (n=1657)

Mean (SD) age, y	38.6 (5.7)
Previous pregnancy	
Yes (%)	91.6%
No (%)	8.4%
Mean (SD) no. of children	1.9 (0.7)
Wish to become pregnant	
Yes (%)	7.6%
No (%)	78.7%
Don't know (%)	13.7%
Origin	
Europe	
Spain (%)	93.5%
Other European country (%)	2.2%
America	
South America (%)	3.4%
North America (%)	0.1%
Asia (%)	0.7%
Africa (%)	0.2%
Living with partner	
Yes (%)	89.6%
No (%)	10.4%
Previous use of LARC	
Yes (%)	36.7%
No (%)	63.3%
LARC requested	
LNG-IUD (%)	97.3%
Cu-IUD (%)	2.7%
Implant (%)	0.1%

method (58.3%). The main methods used by these women at the time of the failure were the condom (44.4%) and oral contraceptives (18.5%). Other reasons for an unintended pregnancy were failure to use a contraceptive method (25%), considering breastfeeding to be a risk-free period (10.4%), and the belief on the part of the woman that she was infertile (6.3%) (Fig. 1B and 1C).

Contraceptive methods used before pregnancy

The main contraceptive methods used by women who had been pregnant during the previous 5 years (n = 729) were the condom (33.1%) and oral contraceptives (29.2%); other methods were used much less frequently (vaginal ring [7.8%], Cu-IUD [3.7%], LNG-IUD [2.6%], and patch [1.5%]). In these cases, the percentage of women who did not use any method reached 12.9%.

We observed a difference in the use of the various types of IUD depending on the number of children in women who planned their pregnancy: those that had only given birth once preferred the Cu-IUD, whereas those who had had more children preferred the LNG-IUD (Figure 2).

Contraceptive methods used after delivery

The main contraceptive methods used during the first year after the last delivery were the condom (42.5%) and oral contraceptives (15.9%), followed by LNG-IUD (6.3%), vaginal ring (5.5%), and Cu-IUD (4%) (Figure 3A). We observed differences in the use of the various methods depending on the desire to become pregnant, with a low percentage of LARC methods recorded.

Of note, a high percentage of women (15%) did not use any method during this year (Figure 3A), the main reasons being the desire to become pregnant (45%), belief that they were not at risk of becoming pregnant (13.8%), fear of adverse effects (11%), and absence of sexual relations (10.1%). Other causes (11.9%) included rest period, laziness, and belief that they could not become pregnant immediately after delivery or when breastfeeding.

The condom was the most frequently used method immediately after delivery, especially during the first 2 months; other methods were less frequent during this period. The Cu-IUD was used mainly from the fourth month after delivery onward, whereas the LNG-IUD was used more frequently from the second and third months after delivery (Figure 3B).

LNG-IUD was the method used longest after delivery (mean, 7.6 [3.6] months) and had the highest continuation rate (67.4%), followed by the condom, oral contraceptives, and coitus interruptus. Other methods with high continuation rates included the Cu-IUD (65.5%) and oral contraceptives (52.6%) (Figure 3C, Table II).

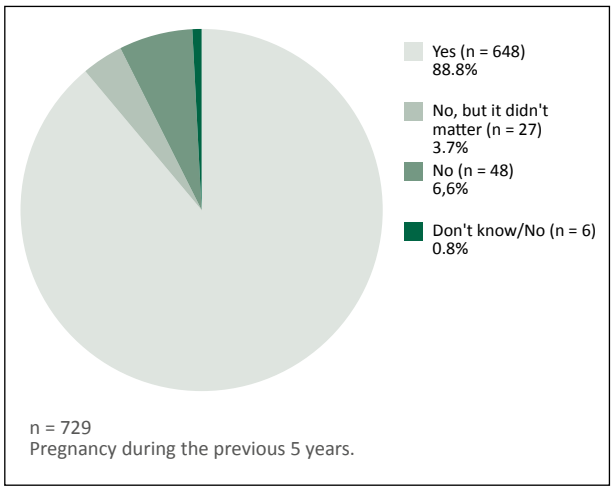

Figure 1A. Types of pregnancy during the last 5 years..

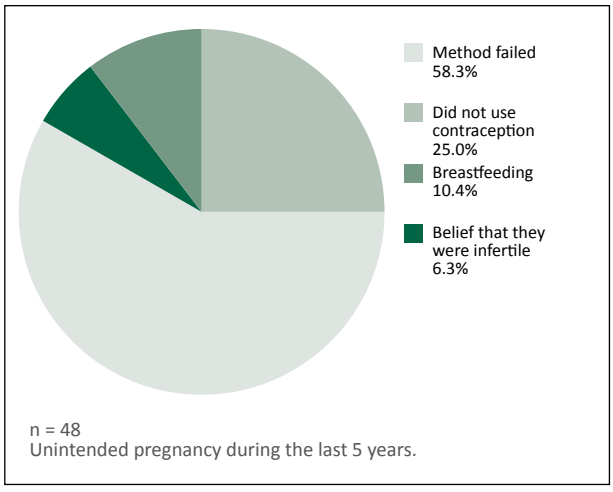

Figure 1B. Reasons for unintended pregnancy.

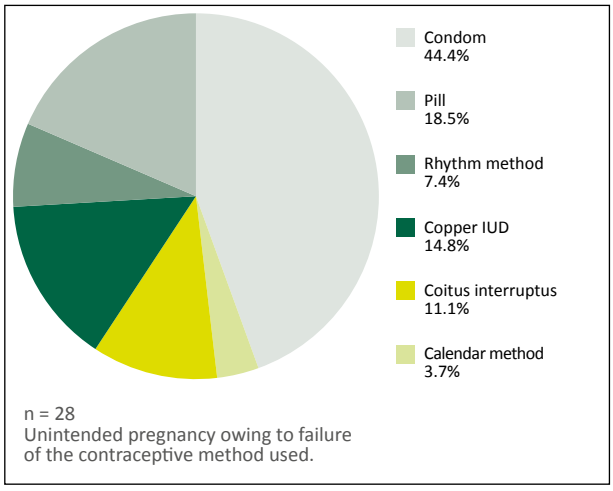

Figure 1C. Methods used by women who had an unintended pregnancy.

Figure 1. Analysis of pregnancies and use of contraceptives before pregnancy.

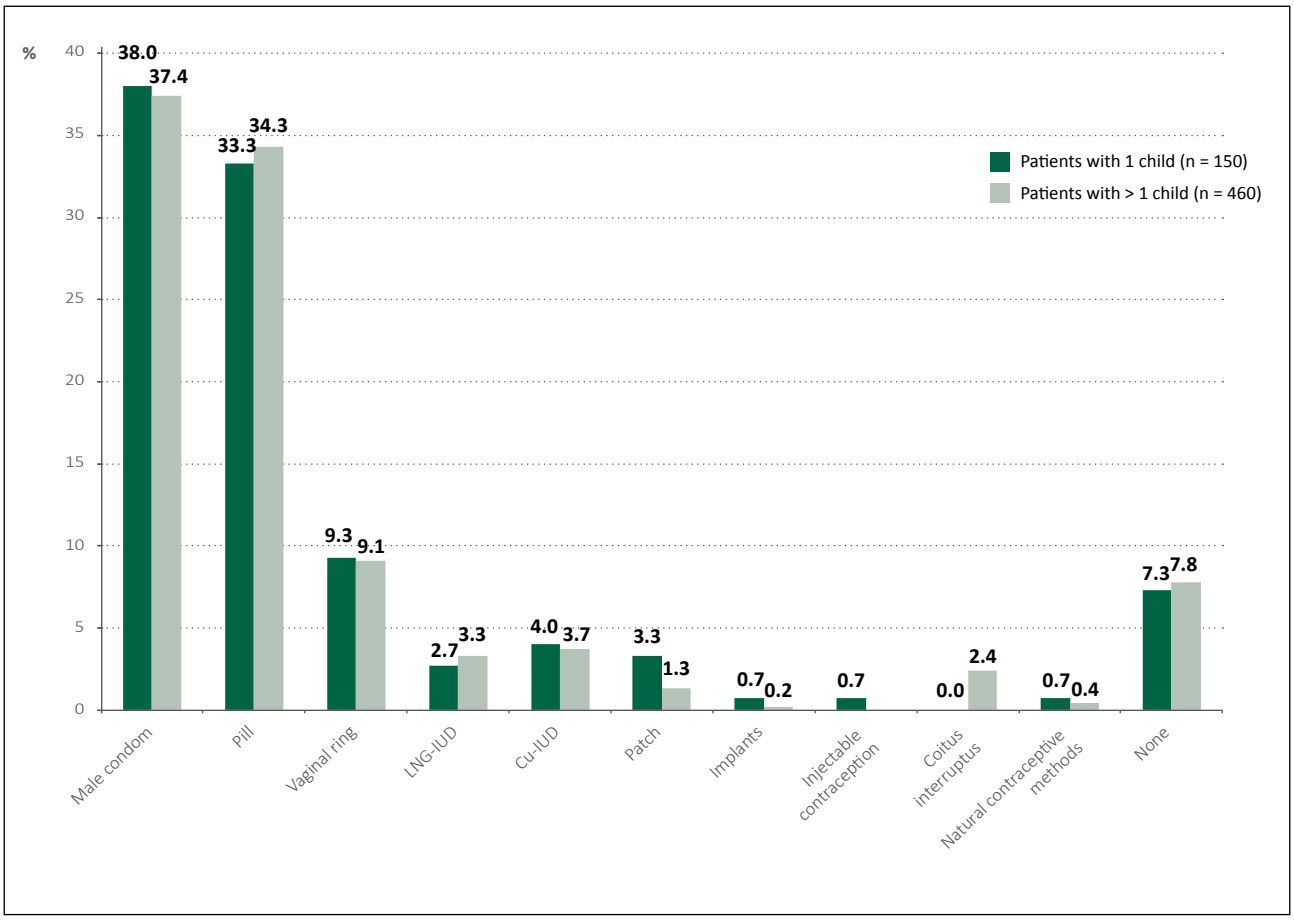

Figure 2. Contraceptive methods used before a planned pregnancy according to the number of children, in patients who chose LNG-IUD.

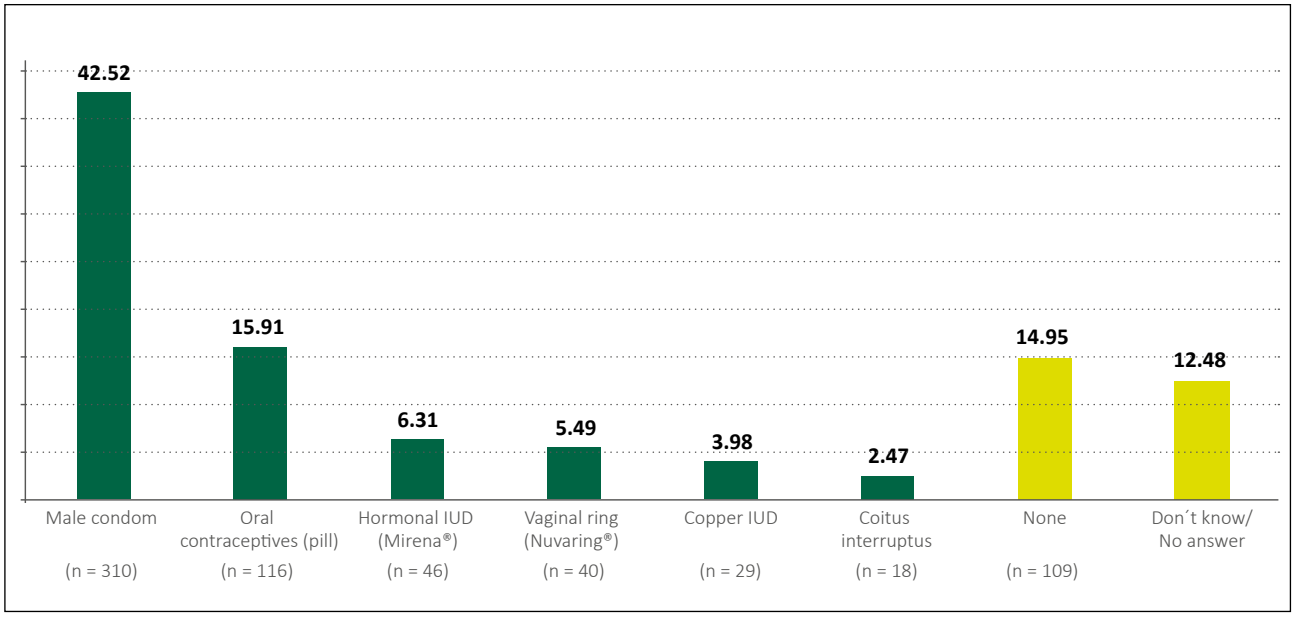

Figure 3A. Contraceptive methods used by women who had been pregnant during the last 5 years (n = 729). Note 1: Patients could choose more than 1 option. Note 2: The data shown here refer to the most recent pregnancy.

DISCUSSION

In Spain, no data have been reported to date on rates of pregnancy—both intended and unintended—in women who choose a LARC method. The same is true of data on the main methods used before and after delivery. The present study shows that 44% of women who visit their gynecologist to request LARC had been pregnant during the previous 5 years. The pregnancy was planned in 88.8% of cases and unplanned in 10.3% of cases (0.8% did not answer). The rate of unintended pregnancy is lower than that recorded in studies from other European countries (8,23).

In a study of 1,001 Swedish women, 22% had had an unplanned pregnancy. The authors concluded that promotion of LARC could be a strategy for reducing the rate of unintended pregnancies (8).

Another cross-sectional study performed in more than 7,000 pregnant women from various European countries (Belgium, Iceland, Denmark, Estonia, Norway, and Sweden) found that 19.2% of pregnancies were unplanned (23).

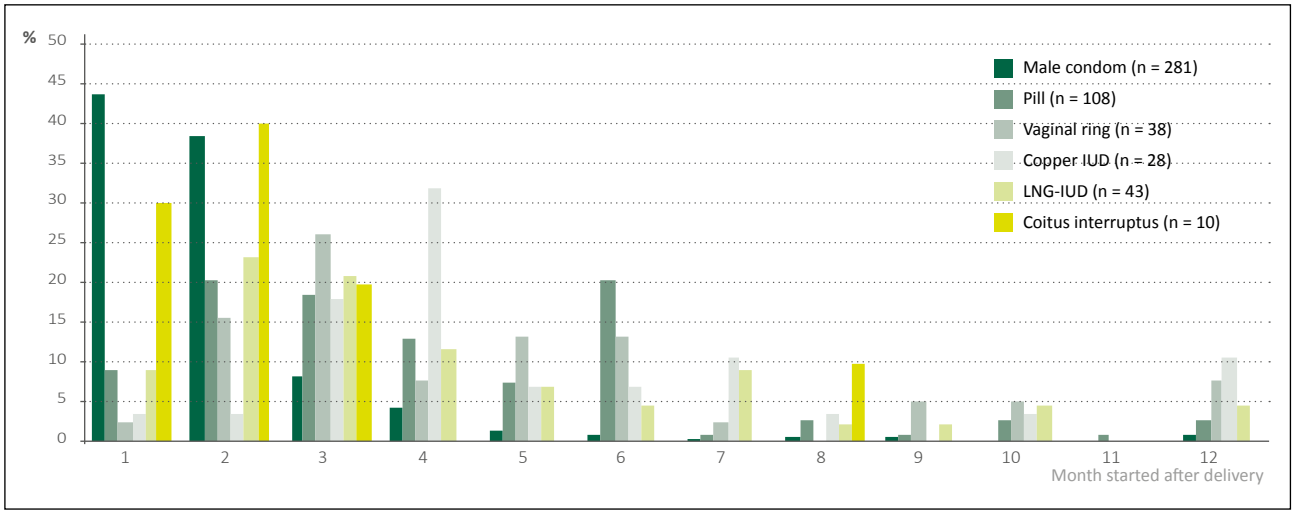

Figure 3B. Time of initiation of the contraceptive method after delivery.

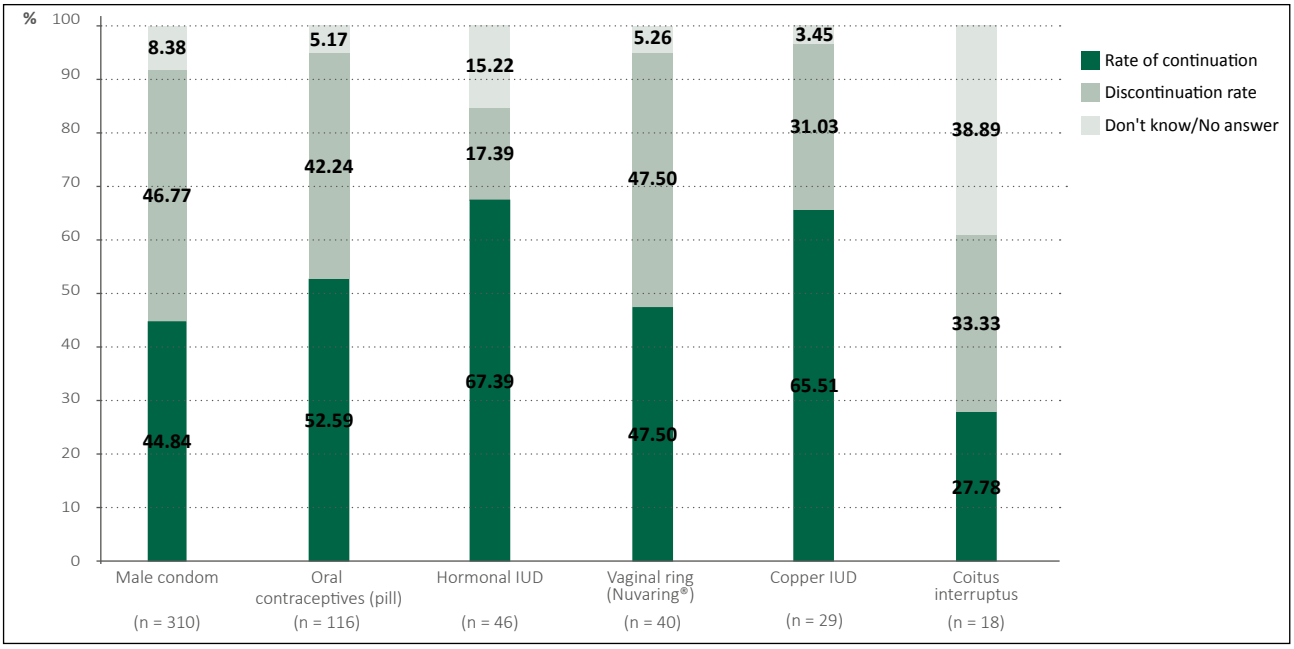

Figure 3C. Continuity of the various contraceptive methods used during the first year after delivery.

Figure 3. Contraceptive methods used during the first year after birth.

Table II.
Median duration of use (months) in patients who discontinued the method used during the first year after delivery

Male condom (n = 145)	7
Oral contraceptive (pill) (n = 49)	7
Hormonal IUD (Mirena®) (n = 8)	8
Vaginal ring (Nuvaring®) (n = 19)	6
Copper IUD (n = 9)	6
Coitus interruptus (pull-out) (n = 6)	6.5

Our findings indicate that the rate of 10.3% could be higher if the analysis had been performed in women in the general population, since the present study was based only on women with higher socioeconomic and cultural levels who attended private clinics. Furthermore, it has been demonstrated that the reduction in the frequency of unplanned pregnancies is associated with high levels of economic growth, socioeconomic development, and promotion of public health (4). In addition, it has been observed that the probability of unplanned pregnancy varies with age, stage of life, and relationship with one's partner (23,24). Therefore, it would be necessary to perform studies in the general population of Spanish women to confirm the rate of unplanned pregnancy in Spain and to evaluate associated factors.

We classified all unintended pregnancies into unwanted pregnancies (6.6%) and unplanned pregnancies (3.7%).

In this sense, a recent study in Germany defined the term "mistimed pregnancies", which, in contrast to unwanted pregnancies, are characterized by negligent use of contraception, a positive reaction to the pregnancy, and a more general desire to have the child (24).

We believe that this definition is important if we are to focus the problem of unintended pregnancy as unplanned and unwanted, which can be terminated. In order to address this high percentage, various experts propose the use of more effective methods, such as LARC (1,8,11), especially after the woman has received information and advice from a gynecologist or health professional (1,18,19,22,25).

The present study focuses mainly on the use of less effective methods, such as the condom and oral contraceptives, which have largely been considered to fail, as reported elsewhere (7,11,18).

Both before and after delivery, we found a low rate of LARC use and considerably high percentages of women who did not use any contraceptive method. The main reasons for not using any method include factors that expose the woman to a new pregnancy such as no perception of risk, fear of adverse effects, and other causes (eg, rest period, inertia, and belief that they could not become pregnant immediately after delivery or when breastfeeding).

At present, many authors address the postpartum risk of pregnancy by supporting immediate postplacental insertion of an IUD as a safe and effective method, with the specific aim of enhancing contraception within the first 6 months after delivery (17-22).

Under these circumstances, when the woman is hospitalized and has just given birth, she is highly motivated with respect to contraception, and the gynecologist's advice is of paramount importance to ensure that she leans towards more effective methods such as LARC (17,18).

In situations where contact with health services is more difficult, access to advice and immediate instruction on contraception, especially LARC-based methods, may not be possible, thus leading to higher percentages of unplanned pregnancy (8,17,26).

In fact, in a previous subanalysis of this study in women who had been prescribed LNG-IUD during the visit, we showed that medical advice was crucial in the choice of LARC method, with most value placed on effectiveness, long duration, ease of use, and safety. Value was also attributed to benefits with respect to the symptoms of menstruation (paper in progress).

Therefore, given the low percentage of LARC use we recorded, it is necessary to take measures in the Spanish public health system so that woman can have access to information and to medical/gynecologic counseling with respect to the efficacy and safety of LARC.

CONCLUSIONS

We can conclude that as LARCs continue to be used infrequently in Spain, both before and after delivery, measures are necessary to increase information and medical/gynecologic counseling with respect to this type of contraception and thus avoid unplanned pregnancies. These methods include insertion of an IUD immediately after delivery or at the end of the first month of puerperium.

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