

Side Effects of Hormonal Contraception of Patients in the Family Planning of Centre University Hospital of Mother and Child Lagoon, Cotonou (Benin)

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Abstract

Objective: To take a census of side effects related to the use of hormonal contraception reported by the women received in the Family Planning (FP) Service of CHU-MEL.

Patients and methods: It was a cross-sectional prospective study which was carried out in the family planning service of CHU-MEL in Cotonou over a three-month period from June 1st to August 31st, 2016.

Results: 303 women were involved in this survey. The average age was 33 years (extremes of 15 and 49 years). Side effects were vaginal bleeding apart from the menses (37.2%) amenorrhea (32%) and weight increase (27.3%). The reasons for abandonment of hormonal contraception were amenorrhea (13%), weight gain (11%), pelvic pain (0.07), nausea (0.05%) and bleeding (0.04).

Conclusion: Hormonal contraception has many side effects. Some of them are well known by patients. They influence compliance with treatment. Their management is not always optimal and leads to abandonment.

Keywords: Hormonal contraception; Side effects; Cotonou

Centre University Hospital of Mother and Child Lagoon, Cotonou (Benin) (CHU-MEL).

Introduction

Hormonal contraception is considered as one of the greatest socio-medical achievements in terms of individual freedom. Pharmacologically, it has always been improved since the introduction of the pill in the 1960s because the biological effects of the sexual steroids used are better known. These effects result from the interaction of the steroids with their receptors found on the genital organs but also on the extra-genital ones, which on the one hand, accounts for the effects expected on genital organs when contraception is used, but also the extra-genital effects observed. Side effects can be major (venous or arterial thromboembolic accidents, metabolic disorders, hormone dependent cancer) or minor (amenorrhea, spotting, weight increase).

They vary from a user to another for the same contraceptive or for different contraceptives. Some effects are independent of the route of administration (oral, vaginal or transdermal) and are linked to the molecule.

But the range of side effects is wide. A good knowledge by care providers of the majority of the side effects reported by the users themselves could help to improve counseling and thus the observance of hormonal contraception by the clients.

That's the justification for our study whose objective was to take a census of the side effects related to the use of hormonal contraception reported by the patients received in the family planning service of the

Materials and Methods

It was a cross-sectional prospective study which was conducted in the family planning service of the Centre Hospitalier Universitaire de la Mère et de l'Enfant Lagune (CHU-MEL) in Cotonou over a three-month period from June 1st to August 31st, 2016. The population for this study consisted of women who made visits for medical examination in the family planning service of CHU-MEL during the study period. It was a non-probability exhaustive sampling method. We included in this study women aged 15 to 49 years using hormonal contraception regardless of the duration of use and they gave their consent. In the context of this study we adopted hormonal methods offered at CHU-MEL: pills, injectable contraceptives, implants. The variables studied were related to socio demographic data, obstetrics and gynecology history as well as medical and surgical history and side effects reported by users. The contraceptive methods adopted were those which were available in the service at the time of this study namely Jadelle implant, combined oral contraceptives (COC), the emergency contraceptive pill and injectable contraceptives. Data were collected by means of a questionnaire administered during a confidential interview. C S PRO version (6.2), Excel (2010 and 2016) and SPSS 23 software was used to process and analyze data. Fisher chi square test was used to study the association of 2 variables with 5% as a significance threshold.

Administrative authorizations at various levels as well as the informed consent of the respondents were obtained before the interview. The anonymity of the respondents and the confidentiality of the information collected were ensured.

Results

Socio demographic data

In total 303 women were chosen within the framework of this survey.

The average age was 33 years with extremes of 15 and 49 years. Those whose age is between 25 and 34 years represented 42.6%.

Moreover, 104 women that is to say 34.3% had a secondary school level.

Married women were the most represented in our sample with a proportion of 83.2%. Single women represented 9.9%, divorced women (5.3%) and widows (1.7%).

Gravidity, parity

Multigravidas represented 53.1% of our population and 42.2% of women were pauciparous.

Hormonal contraception used

The implant was the hormonal contraception the respondents mostly used (47.85%) followed by injectable contraceptives (35.31%) (Figure 1).

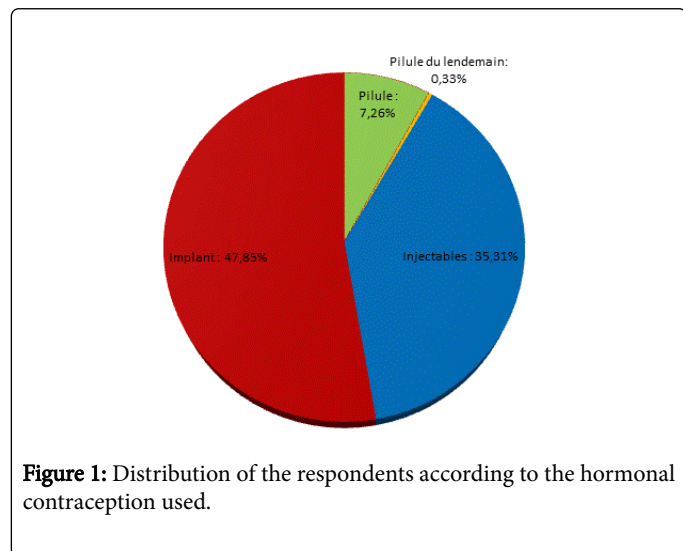


Figure 1: Distribution of the respondents according to the hormonal contraception used.

[The pill (7.26), morning-after pill (0.33%), injectable contraceptives (35.31%), the implant (47.85%)]

Reasons for use

The majority of our sample used hormonal contraception in order to space births.

Side effects of contraceptive methods

Weight increase is the side effect mostly reported by the respondents using the pill with respective proportions of 22.3% and 56.6% (Table 1).

	Percentage pill	implant	injectable contraceptives	Emergency contraception pill
Weight increase	22.3	48.1	56.6	14.8
Genital bleeding	12.9	34.1	48.9	
Amenorrhea	12.9	60.3	54.4	

Table 1: Distribution of side effects according to the contraceptive method.

Amenorrhea is the side effect mostly reported by implant users with a proportion of 60.3%

Reasons for abandonment of hormonal contraception methods (Table 2).

Hormonal contraceptive methods						
Reasons for abandonment	Pill	ECP	Injectable contraceptives	Implant	Total	%
Genital bleeding apart from the menses	1	0	1	7	9	0.04
Hypermenorrhea	1	0	1	7	9	0.04
Amenorrhea	0	0	15	13	28	13
Nausea	4	0	1	6	11	0.05
Weight gain	4	0	6	14	24	11
Weight loss	0	0	1	7	8	0.03
Vertigo	2	0	0	9	11	0.05
Headaches	2	0	3	8	13	0.06
HBP/Palpitations	0	0	3	9	12	0.05
Chest pain	3	0	0	7	10	0.04
Pelvic pain	1	0	0	14	15	0.07

Table 2: Distribution of reasons for abandonment according to the hormonal contraceptive method.

If we consider all the side effects, amenorrhea and weight gain are the main reasons for abandonment respectively in 13% and 11% of cases.

The most important reason for abandonment of the pill is nausea and weight gain: 4 women out of the 85 users stopped taking the pill for each of these reasons that is to say 4.71%.

Amenorrhea and weight gain are the main reasons for abandonment of injectable contraceptives respectively in the following proportions: 9.15% and 6.66%.

Weight gain, pelvic pain and amenorrhea are the most frequent reasons for implant removal respectively in the following proportions: 7.69%; 7.69% and 7.14%.

Discussion

The limits of our study relate to:

- The difficulties to have all the information because the files are badly filled by the medical staff.
- The refusal of some patients to take part in the study.
- Patients don't have enough time to properly answer questions.
- Difficulties in contacting clients to add the missing information in the files.

Socio demographic characters

In Benin, the contraceptive prevalence by modern methods are slow. According to the 2011-2012 Demographic and Health Survey (DHS) IV [1] among the women aged 14 to 15 years, the contraceptive prevalence was 14% with 9% for modern methods and 5% for traditional ones. According to the same survey, there is no significant gap as for women between age groups in terms of knowledge of contraceptive methods. On the other hand, the level of knowledge increases with the educational level. The average age of the respondents in our set was 33 years. This result is much higher than the 27.9 years found by Matungulu in the Democratic Republic of Congo [2]. The age group varying from 24 and 34 years is the most represented in our study. However in Martin and all set in France, the most represented age group is 20 to 25 years [3].

Gynecology and obstetrics history

In our study, 53.1% of the respondents were multigravidas and 42.2% pauciparous. Moreover 24.09% of the respondents had at least one history of voluntary termination of pregnancy (TOP). Prejudices related to hormonal contraception expose lots of women to unwanted pregnancies which often result in voluntary TOPs. However, in their study carried out in Cameroon Diallo A and all observed that multiparous were the largest number of users of hormonal contraceptive methods with a proportion of 41.91% [4].

Use of hormonal contraceptive methods

In our study, a clear preference for long term methods is noticed. This preference of users can be accounted for by their less binding character for women. However, women were only offered contraceptive methods available in the FP service of CHU-MEL during the survey. Patients were not offered the full range of methods.

Reasons for recourse

The only reason for having recourse to contraception in this study is related to pregnancy prevention. Hormonal contraception in addition

to pregnancy prevention has other indications such as the regulation of menstrual cycles, dysmenorrhea etc. Since our study was conducted in the family planning service, these indications cannot be found here. In fact, for these reasons patients are received for a gynecological examination.

Side effects related to hormonal contraceptive methods

As any medicine, contraceptives can cause alternately minor and major side effects. Since the introduction of the pill in the 1960s, pharmaceutical industries have been continuously innovating. Biological effects of sexual steroids used are better known, their doses lowered and the risks better apprehended leading to an improvement of their tolerance [5].

Most side effects occur in the first three cycles. They can result in an abandonment of contraception hence the need for giving appropriate advice to the client by counseling. Nevertheless, this information is not always given by health workers.

According to the DHS IV, 37.6% of the pill users, 52.6% injectable methods and 60.8% of IUD declared that they had been informed of the side effects of their method.

Weight increase

It is one of the most frequently experienced side effects among the respondents who used the implant (56.6%), injectable methods (48.78%), the pill (22.35%), the morning after pill (11.1%). In 2001, a study carried out in France about the frequency of use of the pill showed that the most experienced side effects among all the age groups were weight increase (31%), accounting for the low proportion of women very satisfied with their pill [2].

However, in our study, a quantification of weight increase was not possible on account of the type of study. In case of weight increase, whether it is rapid or gradual, it is due to estrogen which causes sodium and water retention and it is also due to progesterone which has an anabolic effect. It seems less frequent with low-dose pills and apparently, with those containing the new progestogens with low androgenic activity. Nevertheless, comparative placebo-controlled trials failed to establish a link between weight increase and the use of combined oral contraceptives at low dose [6]. The GP also found a large proportion of weight increase of 30% among pill users [7].

As for progestational contraception, it is one of the limiting factors with certain products. medroxyprogesteroneacetate (MPA) is the most incriminated in weight increase with 50% of the users who report a weight gain in Polaneczky's study (average weight gain of 4.1 kg) [5]. This weight gain seems to be due to an appetite stimulation and to a possible anabolic effect.

The other progestogens used as oral contraceptives, Pregnanes and Nor pregnanes, have no anabolic effect and are not in theory responsible for weight increase, and yet sometimes observed. The implant is responsible for more than 10% of weight increase, and more frequently if there is an overweight at the outset [8].

Reservations should be expressed about weight increase reported by the users of emergency contraception (morning-after pill). Emergency contraception is defined as all the means of contraception used after sexual intercourse and before implantation. The most commonly used means can cause a reduction of the risk of pregnancy in the range of 75% to 89%. The method of emergency contraception is meant for an

occasional use, mainly as an adjunct to the regular method of contraception. The side effects related to emergency contraception and reported in a study were nausea (23.1 %) vomiting (5.6 %), dizziness (11.2 %) and fatigue (16.9 %) [9].

Metrorrhagia and amenorrhea

Light-bleeding metrorrhagia (spotting) is common during the first cycles, especially with very low dose pills. It occurs in 10 to 30% of women during the first months of the use of the combined pill and represents a frequent reason for abandonment. As for amenorrhea happens in about 2 to 3% of cases of use. In the other cases, genital infection and organic lesion must previously be looked for before thinking of the atrophy of the endometrium, and possibly the temporary prescription of a pill with more dose of estrogen, or even a light dose of estrogen during a short period [3].

Amenorrhea is unusual with normodose oestrogen-progestogens. First, an unplanned pregnancy must be eliminated before thinking of a significant atrophy of the endometrium. They were reported by 60.3% of the women using the implants and 12.3% of those using injectable contraception in our study.

Grasselin O reported 60.98% of amenorrhea in women using injectable contraception and 12.94% of those using the pill. It is the main side effect of progestogen contraception. Only 40% of long term users of progestogens-only have regular menstrual cycles.

Injectable progestogens represent the main causes of irregular bleeding and amenorrhea, a significant source of abandonment.

With the implant, metrorrhagia is frequent (7%), and willingly extended over a long period (15%). Amenorrhea occurs among about 20% of patients. Irregular bleeding remains the most frequent and annoying problem of this contraceptive method. It is frequent at the beginning of the treatment and represents the main cause of a request for the removal of such a type of contraception. As a matter of fact, it is an inconvenience some patients find unacceptable. Providing information about this risk before the implant placement seems therefore indispensable, hence emphasis must be laid on counseling.

The treatment of frequent or irregular bleeding related to endometrial modifications among women with implants can require non-steroidal anti-inflammatories such as mefenamic acid with which a placebo controlled double blind randomized study is being performed [10].

Other effects

Gastralgia was reported by the morning-after pill users with a proportion of 14.8%, nausea and acne with a proportion of 7.4% for each of them and vertigo (3.7%). KATZMAN DK in a study conducted among teens assessed the tolerance of emergency contraceptive which only contains synthetic progestogens administered in two doses demonstrated that the main side effects during the first week included headaches (50%), fatigue (21%) [10]. He found in much higher proportions nausea (38%) and dizziness (27%) as against 7.4% in our study.

In our set, 11.2% of the users of injectable contraception also described vertigo, nausea and vomiting.

Abandonment and change of hormonal contraceptives: In spite of some advantages, the relation of women to hormonal contraception remains ambiguous. In fact, the impact on their health, their fertility

and their physical appearance make them hold contrasting views. So, while appreciating the possibility of a non-reproductive sexuality and therefore their fertility control, they fear the reported, alleged or experienced adverse effects. One of the main factors which help women to give support to hormonal contraception or to abandon hormonal contraceptive methods remains the way they really experience the side effects [11].

The most frequent reason for stopping a contraceptive method is the desire to have children (25%) followed by health problems and side effects (13%). However, as for the pill and injectable contraceptives specifically the reason put forward by the users is related to health problems (28%) and side effects (30%) [1].

These side effects are therefore an important reason for abandonment of hormonal contraception. In our study, 4 women out of 85 users that is to say 4.71% stopped using the pill for reasons related to nausea and weight gain. According to the GP, 8% of the pill users abandoned this method because of weight increase. FRUZZETTI in a study conducted in Italy reported similar results. As for the pill, the main reasons for abandonment are genital bleeding apart from the menses, weight increase and headaches. 20.5% of patients abandoned the pill because of minor side effects; 4.4% because of major side effects and 3.8% because of compliance [12,13].

Conclusions

Our study focused on hormonal contraceptive methods prescribed in the family planning service of CHU-MEL namely pills, the morning-after pill, injectable methods and the implant.

The main side effects reported by the users are weight increase, abnormal genital bleeding and amenorrhea.

As for the main reasons for the abandonment of contraceptive methods due to side effects nausea and vomiting can be added. Good counseling is indispensable for a successful adherence.

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