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Review article

Elective abortion: Clinical practice guidelines from the French College of Gynecologists and Obstetricians (CNGOF)

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ABSTRACT

The number of elective abortions has been stable for several decades. Many factors explain women's choice of abortion in cases of unplanned pregnancies. Early initiation of contraceptive use and a choice of contraceptive choices appropriate to the woman's life are associated with lower rates of unplanned pregnancies. Reversible long-acting contraceptives should be favored as first-line methods for adolescents because of their effectiveness (grade C).

Ultrasound scan before an elective abortion must be encouraged but should not be obligatory (professional consensus). As soon as the embryo appears on the ultrasound scan, the date of pregnancy is estimated by measuring the crown-rump length (CRL) or, from 11 weeks on, by measuring the biparietal diameter (BPD) (grade A). Because reliability of these parameters is ±5 days, the abortion may be done if measurements are respectively less than 90 mm for CRL and less than 30 mm for BPD (professional consensus).

A medically induced abortion, performed with a dose of 200 mg mifepristone combined with misoprostol, is effective at any gestational age (Level of Evidence (LE) 1). Before 7 weeks, mifepristone should be followed 24–48 h later by misoprostol, administered orally, buccally, sublingually, or even vaginally followed if needed by a further dose of 400 μg after 3 h, to be renewed if needed after 3 h (LE 1, grade A). After 7 weeks, administration of misoprostol by the vaginal, sublingual, or buccal routes is more effective and better tolerated than by the oral route (LE 1). Cervical preparation is recommended for systematic use in surgical abortions (professional consensus).

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Misoprostol is a first-line agent for cervical preparation at a dose of 400 μg (grade A). Vacuum aspiration is preferable to curettage (grade B). A uterus perforated during surgical aspiration should not routinely be considered to be scarred (professional consensus). An elective abortion is not associated with a higher risk of subsequent infertility or ectopic pregnancy (LE 2).

The medical consultation before an elective abortion generally does not affect the decision to end or continue the pregnancy, and most women are sufficiently certain about their choice at this time. Women appear to find the method used most acceptable and to be most satisfied when they were able to choose the method (grade B). Elective abortions are not associated with an increased rate of psychiatric disorders (LE 2). However, women with psychiatric histories are at a higher risk of psychological disorders after the occurrence of an unplanned pregnancy than women with such a history (LE 2).

For surgical abortions, combined hormonal contraceptives — oral or transdermal — should be started on the day of the abortion, while the vaginal ring should be inserted 5 days afterwards (grade B). For medical abortions, the vaginal ring should be inserted in the week after mifepristone administration, while the combined contraceptives should begin the same day as the misoprostol or the day after (grade C).

Contraceptive implants should be inserted on the same day as a surgical abortion, and may be inserted the day the mifepristone is administered for medical abortions (grade B and C respectively). In case of medical abortion, the implant can be inserted the same day the mifepristone is administered (grade C). Both the copper IUDs and levonorgestrel intrauterine system should be inserted on the day of the surgical abortion (grade A). After medical abortions, an IUD can be inserted in 10 days after mifepristone administration, after ultrasound scan verification of the absence of an intrauterine pregnancy (grade C).

Contents

Introduction

The sponsor (the French College of Gynecologists and Obstetricians, CNGOF) appointed a steering committee (Appendix A) to define the exact questions to be put to experts, to choose them, follow their work, and draft the synthesis of recommendations resulting from their work [1]. The experts analyzed the scientific literature on the subject to answer the questions raised. A literature review identified the relevant articles through mid-2016 by searching the MEDLINE database and the Cochrane Library. The search was restricted to articles published in English and French [2,3]. Priority was given to articles reporting results of original research, although review articles and commentaries were also consulted. Guidelines published by organizations or institutions such as the American College of Obstetricians and Gynecologists (ACOG), the Royal College of Obstetricians and Gynaecologists (RCOG), the Canadian Society of Gynaecology and Obstetrics (SOGC), the World Health Organization (WHO) as well as previous guidelines published by the CNGOF were reviewed. Additional studies were located by reviewing bibliographies of identified articles. For each question, an overview of validated scientific data was assigned a level of evidence based on the quality of the data, in accordance with the framework defined by the HAS (French Health Authority) [3], summarized below.

Quality of evidence assessment

LE 1: very powerful randomized comparative trials, meta-analyses of randomized comparative trials;

LE 2: not very powerful randomized trials, well-run non-randomized comparative studies, cohort studies;

LE 3: case-control studies;

LE 4: nonrandomized comparative studies with large biases, retrospective studies, cross-sectional studies, and case series.

A synthesis of recommendations was drafted by the organizing committee based on the replies given by the expert authors. Each recommendation for practice was allocated a grade, defined by the HAS as follows:

Classification of recommendations

Grade A: Recommendations are based on good and consistent scientific evidence

Grade B: Recommendations are based on limited or inconsistent scientific evidence

Grade C: Recommendations are based primarily on consensus and expert opinion

Professional consensus: In the absence of any conclusive scientific evidence, some practices have nevertheless been recommended on the basis of agreement between the members of the working group (professional consensus).

All texts were reviewed by persons not involved in the work, i.e., practitioners in the various specialties concerned, working in various situations (public, private, university, or non-university establishments) (Appendix A). Once the review was completed, changes were made, if appropriate, considering the assessment of the quality of the evidence.

The original long texts in French are cited [4–10], but their individual references are not included here in view of the enormous space they would occupy in this article intended to summarize the guidelines. State of knowledge about misoprostol's use out of its marketing authorization during first trimester of pregnancy, in early miscarriage or to induce abortion or medical termination of pregnancy was already published by Beucher at al. in 2014 for the French College of Obstetricians and Gynecologists (CNGOF) [11,12].

Epidemiology of induced abortion [4]

An abortion is a termination of pregnancy up to 14 weeks of gestation medically or surgically for non-medical reasons and authorized by French law. An unplanned pregnancy results from sexual unprotected intercourse or follows contraceptive failure in women who do not wish to be pregnant.

The number of elective abortions in France has remained stable for several decades. We remain, however, confronted with a "French paradox": high rates of contraceptive use, with stable rates of elective abortions and unplanned pregnancies. The frequency of the latter has been reduced by the widespread use of effective contraceptive methods. On the other hand, recourse to elective abortion in these unplanned pregnancies is also more frequent, so that the total number of elective abortions has not fallen for 40 years.

The social determinants of a woman's choice to have an abortion for an unplanned pregnancy depend on her age. Among those younger than 25 years, they depend especially on educational level; among those aged 25–34 years, on the number of children she has; and among those older than 35 years, on her possibilities for combining motherhood and career [13]. On average, two out of every five women, in France, will have an elective abortion during their child-bearing years, probably during a period of transition (change of partner, situation, contraception, etc.). Although all women are at risk of an unwanted pregnancy which may terminated by an elective abortion, this risk is not equal; it varies according to age, birth place, marital or relationship status, past or present exposure to intimate partner violence, and family and work situations. This is especially true for women who have repeated elective abortions. Women who come for a repeat elective abortion more often report intimate partner violence or an unstable relationship; they are also younger and more often students or in a difficult social situation.

Healthcare professionals must pay more attention to the need for contraception and the prevention of unplanned pregnancies particularly for women younger than 20 or older than 40 years, women at medical or social risk of misusing contraceptives or who consult less often than others (because of obesity, for example), and those with a history of unplanned pregnancies. Early initiation of contraceptive use and a choice of contraceptive appropriate to the woman's life are associated with a lower rate of unplanned pregnancies. Reversible long-acting contraceptives, that is, the implant and the intrauterine device (IUD) should be favored as first-line methods for adolescents, because of their effectiveness (**grade C**). Healthcare professionals must be aware of the contraceptive prescribed after an abortion, taking into account both the women's choices and also the failures of preceding contraceptives. If the woman wants a contraceptive, it should start immediately after the abortion (**professional consensus**).

Role of ultrasound in elective abortion [5]

While a dating ultrasound should be encouraged, its absence is not an obstacle to scheduling an abortion for women who are certain of their last menstrual period and/or the date of the sexual relations that led to conception and for whom a clinical examination by a trained healthcare professional is possible (**professional consensus**).

In estimating gestational age for a planned elective abortion, in the absence of a visible embryo, the pregnancy is dated only by measurement of the gestational sac **(grade B)**. In the absence of a visible embryo for a progressing intrauterine pregnancy, the gestational age is always less than 7 weeks (**grade B**). The presence of a yolk sac is a sign of an intrauterine pregnancy. During an ultrasound scan, the date of conception is estimated by measurement of the crown-rump length (CRL),as defined by Robinson, or from 11 weeks by measurement of the biparietal diameter (BPD), as defined by the French Center for Fetal Ultrasound (CFEF) (INTERGROWTH Curves) (**grade A**).

If the gestational age is close to 14 weeks, an ultrasound scan is recommended to confirm the dating (**professional consensus**). CRL and BPD measurements that correspond to an estimated gestational age of 14 weeks are respectively 80 mm and 27 mm. Because the measurements are reliable to $\pm$5 days, the abortion can be performed when the CRL and BPD measurements are respectively $<$90 mm and $<$ 30 mm (**professional consensus**). The methods for dating gestational age are the same for twin and singleton pregnancies.

Transabdominal (TA) ultrasound has a good sensitivity for diagnosing the presence or absence of a gestational sac, but its sensitivity for the detection of an embryo and of cardiac activity is less than that of transvaginal sonography (TVS) (**LE 3**). Accordingly, most of women can first have a TA scan ultrasound, with a TVS reserved for situations where visualization by the TA route is poor, especially for gestatonal around 7 weeks (CRL) **(professional consensus**). If there is uncertainty about site or viability of the pregnancy with a TA scan, then a TVS is recommended **(grade B**).

Serum HCG level is not a reliable method for dating pregnancy (**LE4**) and must not be used to date a pregnancy for which an elective abortion is planned (**grade C**).

There is not sufficient evidence to recommend a routine ultrasound scan during or after a surgical abortion (**professional consensus**). When it is performed, endometrial thickness greater than 8 mm should lead to re-evacuation (**grade B**). Ultrasound examination of the endometrium several days after a surgical abortion does not appear to be relevant (**grade B**).

Ultrasound scan is not routinely recommended after a medical abortion (**grade B**). If TVS is performed after a medical abortion, it should take place at least two weeks afterwards (**professional consensus**). Measurement of endometrial thickness has no place in assessing the indication for re-evacuation (**professional consensus**). If an ultrasound is performed following a medical abortion, its only aim should be to confirm the absence of the gestational sac (**Professional consensus**).

Medically induced abortion [6]

A medically induced elective abortion, performed with 200 mg of mifepristone combined with misoprostol, is effective at any gestational age (**LE1**). There is currently no medical alternative as effective and certain as the combination of mifepristone and misoprostol for this purpose (**LE 1**). The mifepristone dose of 200 mg is preferred to 600 mg (**grade A**). Misoprostol alone is less effective than the combination of mifepristone and misoprostol (**LE 1**). For optimal effectiveness, the time between the administration of the two drugs must not be less than 8 h (**LE 1, grade A**).

An interval of 24–48 h has no negative influence on the effectiveness of the medical technique as long as the dose of misoprostol is sufficient (**LE 1, grade A**). In view of its safety and the excellent satisfaction rates among women, taking mifepristone at home must be facilitated (**professional consensus**).

The routes of administering misoprostol are vaginal, oral (with the tablets swallowed), sublingual (with the tablets melting under the tongue), and buccal (with the tablets placed between the cheeks and the gums, and the women swallowing the remaining fragments at the end of 30 min). The buccal route is also referred as jugal.

Before 7 weeks, mifepristone should be followed 24–48 h later with misoprostol, administered orally, buccally, sublingually, or even vaginally at a dose of 400 μg and then renewed if needed after 3 h (**LE 1, grade A**).

After 7 weeks, the administration of misoprostol by the vaginal, sublingual, or buccal route is more effective and better tolerated than the oral route (**LE 1**) **and should be preferred** (**grade A**).

Between 7 and 9 weeks, oral mifepristone should be followed 24 to 48 h later by 800 μg of misoprostol administered either vaginally, buccally, or sublingually, followed if needed by a further dose of 400 μg after 3–4 h (**grade A**). Success with these options exceeds 98% (**LE 1**). Between 7 and 9 weeks, it does not appear to be necessary to repeat misoprostol doses systematically but such repetition is recommended after 9 weeks (**grade B**).

Between 9 and 12 weeks, oral administration of mifepristone should be followed 24–48 h later by vaginal, buccal, or sublingual administration of 800 μg of misoprostol. Up to 5 additional 3 hourly 400-μg doses of misoprostol could be administered vaginally, buccally, or sublingually until expulsion of the embryo (**LE 2**, **grade B**).

After 12 weeks, oral mifepristone is followed 24–48 h later by repeated doses of misoprostol. The initial misoprostol dose is 800 μg given vaginally. Up to 5 additional 3 hourly 400-μg doses of misoprostol could be administered vaginally, buccally, or sublingually until expulsion of the fetus (**LE 2**, **grade B**).

Between 9 and 14 weeks, medical and surgical methods should both be available. Women must be informed of the advantages and disadvantages of each method according to gestational age and side effects so that they can make a choice based on their personal situation and feelings about each technique.

Breast-feeding, obesity, twin pregnancies, and a previous cesarean delivery are not contraindications to a medical abortion. There is no evidence supporting a modification of the protocol for medical abortion in these situations (**professional consensus**).

Pain management by the analgesic step ladder is essential for the woman's comfort (**professional consensus**). Pain and its management should be assessed by a visual analog scale (VAS) or a numeric scale. Phloroglucinol has not been shown to be effective (**LE 1**) and is therefore not recommended (**grade A**). Paracetamol is inadequate for pain management for elective abortions (**LE 1**). Ibuprofen is more effective than paracetamol (**LE 1**). The dose is 400–600 mg, to be repeated if necessary but not exceeding 1200 mg (**expert opinion**). Routine ibuprofen administration is not more effective than administration on request (**LE 1**), but for organizational reasons it may be given routinely (**professional consensus**). There is currently no recommendation about the timing of analgesic administration (**professional consensus**).

In the absence of risk factors and symptoms, a pregnancy of unknown location does not contraindicate a medical abortion. It is nonetheless recommended that women be informed of the risks associated with non-diagnosis of ectopic pregnancy and of its warning signs (**professional consensus**). In this context, follow-up with HCG plasma assay is recommended before and after the procedure (**professional consensus**). It can be concluded that the procedure was successful if there is a 50% decrease in the HCG concentration at D5 and 80% at D7 (**LE 3**).

Although a follow-up consultation is not clinically essential, it is nonetheless important to ensure that the abortion was effective (**LE 2**, **grade B**). Other methods, more flexible and better adapted to the woman's living conditions, can also be conceived to verify this (self- testing, telemedicine). Moreover, the post-abortion consultation has other objectives (contraception, feedback of abortion experience) and must therefore be systematically proposed (**professional consensus**).

Questioning the woman, either alone or combined with a clinical examination, does not allow for a reliable determination that an abortion was successful (**LE 1**). A serum HCG assay 15 days after a medical abortion can be used to judge its success (**grade B**). A decrease of greater than 80% in the HCG level 15 days after the medical abortion is an indicator of its success (**grade B**).

Urinary pregnancy test can also be used for this judgment (**LE 2**). It can be performed at home and combined with a follow-up telephone call (**grade B**). When this follow-up method is chosen, it can take place starting at 2 weeks after the abortion (**grade B**).

Surgically induced abortions [7]

Elective surgical abortions have a high success rate, regardless of gestational age, even before 7 weeks (**LE 2**). The international data about the feasibility and safety of the practice of elective abortions outside of hospital systems are reassuring (**LE 2**). Nonetheless, today, we have no French data enabling a comparison of the success rates or risks associated with elective surgical abortions in hospital and health centres (**expert opinion**).

The 2012 French College of Obstetricians and Gynecologists (CNGOF) guidelines about antibiotic prophylaxis for surgical abortions, updated in 2016, remain in effect [14]. Routine antibiotic prophylaxis must be preferred to targeted antibiotic prophylaxis (**grade A**).

Cervical preparation makes it possible to reduce rare but potentially serious complications (**LE 1**) at the cost of more frequent but not serious adverse effects (**LE 1**) and is therefore recommended for systematic use in elective surgical abortions (**professional consensus**).

Misoprostol is a first-line agent for cervical preparation, aimed at reducing the complications associated with the surgical procedure (**grade A**). It is more effective for cervical dilatation than gemeprost or NO donors (as isosorbide mononitrate or isosorbide dinitrate spray) and has fewer adverse effects (**LE 1**). Misoprostol is preferable to laminaria because women find it more satisfactory (**grade A**).

A misoprostol dose of 400 μg is recommended for cervical preparation because it is more effective than a 200-μg dose (**grade A**). A higher dose is no more effective and is less well tolerated (**grade B**). When misoprostol is used before a vacuum aspiration procedure, the woman may choose between two routes of administration: vaginal, 3 h before the procedure (**grade A**) because of its good efficacy/tolerability ratio, or sublingual, 1–3 h before the procedure (**grade A**) because of its superior efficacy (**LE 1**). The woman must be advised that the latter is associated with more frequent adverse gastrointestinal effects than vaginal administration (**grade B**).

Either the physician or the woman may insert the misoprostol into the vagina, and this choice should be made by the woman (**professional consensus**).

Mifepristone without misoprostol has not been adequately evaluated before surgical abortion. Adding 200 mg of mifepristone to misoprostol 24–48 h before the procedure is beneficial for women with pregnancies between 12 and 14 weeks' gestation (**LE 2**). The routine use of non-steroidal anti-inflammatory drugs is

recommended to limit surgical and postoperative pain (**grade B**). Preoperative analgesic treatment may include the prescription of 600 mg of ibuprofen (**professional consensus**). Phloroglucinol is not recommended for this indication (grade B).

There is no clinically significant difference in the risk of general and local anesthesia (**LE 4**). Satisfaction is significant and similar for both types (**LE 2**). The choice of anesthesia must be left to the woman after explaining the risks and benefits of the options (**grade B**).

The anesthetic technique most frequently evaluated in elective abortions is local paracervical block (PCB). No technique for local anesthesia has been shown to be superior to it (**LE 1**). It is therefore a first-line technique for an elective abortion under local anesthesia (**professional consensus**). During PCB, the injection of Lidocaïne 1% may be made at 2 or 4 points, to a depth greater than 1.5 cm (**grade B**). The use of 4 metered doses of 5% lidocaine spray can be offered before the PCB is administered (**professional consensus**). The use of 2% lidocaine gel 30 to 45 min before the procedure is an interesting noninvasive alternative (**grade B**).

Vacuum aspiration is preferable to curettage (**grade B**). Electric and manual aspiration are both very effective low-risk methods that are acceptable to women (**grade A**). Women appear to have a subjective preference for manual aspiration (**grade B**). Electric aspiration should be favored after 9 weeks (**professional consensus**). It is recommended that a curette is not be used to assess the success of the intervention in the immediate postoperative period (**professional consensus**).

Paracetamol, alone or combined with codeine, has not been demonstrated to provide effective analgesia after a surgical abortion (**LE 2**). Its routine prescription is therefore not recommended (**grade B**).

At the woman's discharge, she must receive an operative report providing sufficient information to any another physician who might be called to manage eventual complications (**professional consensus**).

The post-abortion consultation has several objectives (verification of the effectiveness of the procedure, contraceptives, experience of the abortion) and must therefore be routinely proposed (**professional consensus**).

In conclusion, the differences in terms of success, side effects, and organ injuries between surgical and medical elective abortions are very small (**LE 2**). Accordingly, the choice between the surgical and medical methods should be left to the woman regardless of gestational age, after explaining the advantages and disadvantages of both procedures (**professional consensus**).

Complications of elective abortions [8]

Perforation of the uterus during surgical aspiration is a rare event that may not always be recognized. In the absence of signs of peritoneal irritation, increasing pain, and signs of blood loss, it is possible that no action is necessary (**professional consensus**). A uterus perforated during a surgical aspiration must not routinely be considered to be scarred (**professional consensus**).

Management of retained products of conception (POC) after elective medical abortion should not be different from that after a spontaneous pregnancy loss (**professional consensus**). POCs will therefore be managed by either surgical aspiration or administration of misoprostol; expectant management is not recommended. In the absence of clinical symptoms, menstrual period can be regarded as confirmation of the absence of retention (**professional consensus**). If symptoms are present or the retention of products persists after the menstrual period, the uterus should be evacuated under hysteroscopic control (**grade A**). Management after a surgical abortion is the same unless the retained material is embryonic residue that requires immediate surgical aspiration (**professional consensus**). Misoprostol administration before surgical aspiration reduces the risk of an incomplete abortion (**LE 2**).

A hemorrhage resulting from an elective abortion is a very rare event (1% of cases) with transfusion required in 0.1% of cases. A hemorrhage associated with a medical abortion calls for emergency surgical aspiration.

It is estimated today that the risk of death associated with an elective abortion in countries where abortion is legal is of the order of less than one woman per 100,000, a number substantially lower than the risk of death associated with giving birth.

Surgical abortion is not associated with an increased risk of subsequent infertility (**LE 2**). A previous elective abortion does not appear to be a risk factor for a spontaneous abortion unless the interval between the elective abortion and the subsequent pregnancy is less than 3 months. Nonetheless, this increase in risk is sufficiently low that it is not necessary to recommend that women wait 3 months after an elective abortion before starting a new pregnancy (**professional consensus**). A history of elective abortion does not appear to be a risk factor for ectopic pregnancy (**LE 2**).

Overall, a surgical abortion by aspiration does not appear to increase the risk of abnormal placentation in a subsequent pregnancy (**LE 2**).

A surgical abortion during the first trimester, performed by aspiration, does not appear to be a risk factor for subsequent preterm delivery (**LE 3**). A medical abortion, even repeated, is not associated with an increased risk of subsequent preterm birth (**LE 2**). Rh-negative women having an elective abortion should receive prophylactic rhesus antibody, regardless of gestational age (**grade B**). An elective abortion is not a risk factor for breast cancer (**LE 2**).

Psychological aspects of elective abortions [9]

The medical consultation before an elective abortion generally does not influence the decision to end or continue the pregnancy, and most women are sufficiently certain about their choice at the time of the consultation. These appointments provide information and listening to the woman (**professional consensus**). The presence and availability of a support team is essential to reformulate as many times as necessary everything that the women feels the need to hear (**professional consensus**).

It is desirable that the facility has specific hours exclusive for women seeking an elective abortion (**professional consensus**). Meeting the woman alone not only ensures her freedom of choice (**professional consensus**), but also gives her the freedom to describe her history, post questions and express concerns freely (**professional consensus**).

It is recommended that the woman/couple be asked if they wish to see the ultrasound images (**grade C**). The woman must receive the same quality of support regardless of the method she chooses (**professional consensus**). Equivalent access to each method should be provided by presenting both in a clear and informed manner (**professional consensus**).

Women should participate actively in choosing the method of anesthesia after they receive appropriate information (**grade C**). The woman should not be advised from the outset to use one or the other method; instead, the methods available at the facility should be described as objectively as possible (**professional consensus**).

It is important to determine with the woman how much time she needs to make her decision about an elective abortion. It is recommended that the staff suggest other resources for consultations (with a physician, midwife, marriage counselor, psychologist, or social worker) during the waiting time before the abortion (**professional consensus**). As clinical-ultrasound

dating is imprecise (±5 days), enough time must be left for her to make her decision, even at gestational ages close to the legal limit.

It is recommended that requests for consultations for an elective abortion are not refused, regardless of the gestational age of the pregnancy and even at a period thought to exceed 14 weeks (**professional consensus**). The professional should also offer the woman's partner the possibility of support (**professional consensus**). It is recommended that the professional who meets them remains available and easily reachable for the best experience of a medical abortion at home (**professional consensus**).

Women appear to find the method used most acceptable and to be most satisfied when they were able to choose it (**grade B**). From a psychological point of view, the choice of method should be offered to women regardless of gestational age (**professional consensus**). Healthcare providers must be made aware of the importance of adapting their behavior and discourse to each individual woman (**professional consensus**). The woman may raise the question of what happens to the products of conception. It is important to be able to use the appropriate words to name this (**professional consensus**).

According to the literature, recourse to elective abortion is not associated with an increased rate of psychiatric disorders (**LE 2**). However, women with a psychiatric history are at a higher risk of psychological disorders after the occurrence of an unplanned pregnancy than women without such a history (**LE 2**).

It is necessary to provide support for all women with an unplanned pregnancy, regardless of the pregnancy outcome (**grade B**).

The facilities offering elective abortion services are propitious sites for identifying and beginning to provide care for vulnerable women, by referring the women appropriately to relevant support services (**expert opinion**).

Post-abortion contraceptives [10]

Reversible long-acting contraceptive methods — intrauterine devices (IUDs) and contraceptive implants — appear more effective for avoiding the repetition of elective abortions, especially if they begin early after the abortion (**LE 3**).

For surgical abortions, combined hormonal contraceptives — oral or transdermal— should be started on the day of the abortion, while the vaginal ring should be inserted 5 days afterwards (**grade B**). For medical abortions, the vaginal ring should be inserted in the week after the mifepristone administration, while the oral or transdermal combined hormonal contraceptives should be started on the same day as the misoprostol, or the day after (**grade C**), because they have no effect on the abortive effectiveness of mifepristone (**LE 2**).

Progestogen only should be started on the day of the surgical abortion. In medical abortions, they should be started on the same day as the misoprostol administration or the next day (**professional consensus**).

Implants should be inserted on the same day as a surgical abortion (**grade B**), and the day of the mifepristone administration (or later) for medical abortions (**grade C**). This early insertion is not associated with an increased risk that the medical abortion underway will fail (**LE 3**).

In cases of surgical abortion, the immediate insertion of an IUD is a low-risk procedure; infectious complications and perforations are rare in this context. The rate of IUD expulsion is higher in this situation, but so is the rate of use at 6 months (**LE 1**). Accordingly, copper IUDs or the levonorgestrel intrauterine system should preferably be inserted the day of the surgical abortion (**grade A**).

After medical abortions, an IUD can be inserted up to 10 days after mifepristone administration, after ultrasound verification of the absence of an intrauterine pregnancy (**grade C**) because no more expulsions, infections, perforations or bleeding occur than with a delayed insertion **(LE 3**). The rate of continued use of this contraceptive method appears similar at 6 months after insertion, but more women come to the post-abortion consultation when insertion takes place early (**LE 3**).

Although we have no data about potential interference between the substances used for an elective abortion and those used for emergency contraception, it is reasonable to propose the use of emergency contraceptives after an elective abortion (regardless of the time since the abortion) in situations at risk (**professional consensus**).

Conflicts of interest

AA has been a consultant for Nordik Pharma since 2011.
KB was a consultant for MSD in 2015.
CF was a consultant for MSD in 2015.
DH was a consultant for HRA Pharma in 2015.
CJ is a consultant for Teva Pharma and HRA Pharma.
No conflicts of interest for the other authors.

Appendix A.

A.1. Steering committee

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