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The biomedicalisation of illegal abortion: the double life of misoprostol in Brazil

A biomedicalização do aborto ilegal: a vida dupla do misoprostol no Brasil

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Abstract

This paper examines the double life of misoprostol in Brazil, where it is illegally used by women as an abortifacient and legally used in obstetric hospital wards. Based on my doctoral and post-doctoral anthropological research on contraception and abortion in Salvador, Bahia, this paper initially traces the "conversion" of misoprostol from a drug to treat ulcers to a self-administered abortifacient in Latin America, and its later conversion to aneclectic global obstetric tool. It then shows how, while reducing maternal mortality, its use as an illegal abortifacient has reinforced the double reproductive citizenship regime existing in countries with restrictive abortion laws and poor post-abortion care services, where poor women using it illegally are stigmatised, discriminated against and exposed to potentially severe health risks.

Keywords: illegal abortion; misoprostol; reproductive health; biomedicalisation; Brazil.

Resumo

O artigo examina a vida dupla do misoprostol no Brasil, onde ele é usado ilegalmente por mulheres como um facilitador do aborto, e legalmente, em alas de obstetrícia de hospitais. Utilizei minhas pesquisas antropológicas de doutorado e pós-doutorado sobre contracepção e aborto em Salvador, Bahia. Começo retratando a "conversão" do misoprostol, medicamento usado para tratar úlceras, em um facilitador do aborto autoadministrado na América Latina, e sua conversão em uma ferramenta de obstetrícia global. Apesar da redução da mortalidade materna, seu uso como um método abortivo ilegal reforçou a dupla cidadania reprodutiva em países com restrições abortivas e pouca assistência pós-aborto, onde mulheres pobres que usam o método ilegal são estigmatizadas, discriminadas e expostas a potenciais riscos à saúde.

Palavras-chave: aborto ilegal; misoprostol; saúde reprodutiva; biomedicalização; Brasil.

A young obstetrician-gynaecologist named doctor Estela,[1] working in a public maternity-hospital (HP), once told me "Misoprostol has been a revolution in obstetrics." Then, she added, "It is very useful and it is safe, even if patients using it should be monitored".[2]

As Estela and most of her colleagues stressed, misoprostol is a very efficient, low cost drug that has few minor side effects, if appropriately used according to evidence-based protocols and dosage-regimens. It can be used for a number of different obstetric procedures, to complete incomplete abortions, to induce labour with a live foetus or in case of early embryonic loss or intrauterine foetal death. It can also be used to induce abortions, but this is a rare event in Brazilian public hospitals, because abortion is legal and free only in the case of rape, maternal life risk and, since 2012, anencephaly. Despite this, not all State hospitals provide abortion care.

Misoprostol was registered for the treatment of peptic ulcers in many countries, including Brazil, during the second half of the 1980s, under the name Cytotec. An analogue of prostaglandin E1, its use was not recommended for pregnant women, because it could cause uterine contractions and miscarriage (Weeks, Faundes, 2007). It is not clear how women found out that it was a very effective abortifacient, but in the late 1980s/early 1990s it was already widely used by Brazilian women to terminate their pregnancies illegally (Coelho et al., 1993; Costa, Vessey, 1993). In the following decade, its use as an effective abortifacient and an eclectic obstetric tool became widespread throughout the world, both in countries with restrictive abortion laws and in countries with more liberal laws.

Since then, in Brazil as well as in many other countries with restrictive abortion laws, misoprostol has lived a double life and has maintained an ambiguous medical and legal status. In fact, it has a completely different status in hospitals, where it is legally used for a number of obstetric procedures, whereas on the streets it is illegally purchased on the black market or via the internet by women to self-induce abortion.

"Thank God misoprostol exists today!" exclaimed Jorge, a young obstetrician-gynaecologist working at another hospital (HF), located on the outskirts of Salvador, when I asked him what he thought of misoprostol. "In the old days the mortality rates were much higher as a result of the atrocities that were committed. However, nowadays most women use Cytotec. We know that many people working in hospitals sell Cytotec illegally."[3]

As both doctors Jorge and Estela pointed out, misoprostol has been a "revolution" not only in the work of obstetrician-gynaecologists, but also in many women's lives. In fact, its use has been shown to be safe and effective (Shannon et al., 2004; WHO, 2012) and has led to a decrease in maternal morbidity and mortality rates due to other, more dangerous procedures in countries with restrictive abortion laws, like Brazil and Santo Domingo (Coelho et al., 1993; Costa, Vessey, 1993; Miller et al., 2005).

In the following section, I briefly trace the history of misoprostol. As we shall see, Latin America and Brazil in particular have been the cradle of misoprostol's "conversion" from a drug to treat ulcers to an effective abortifacient and obstetric tool. The expertise and knowledge originally accumulated by women then circulated from Latin American streets and women's homes to scientific laboratories and hospitals all over the world, improving the health and life of millions of women.

In the second part of the article, I analyse the double life and the ambiguous legal and moral status of this drug in Brazil, both in the hospital and on the street, based on the ethnographic

data collected between 2002 and 2009, during my PhD and postdoctoral research in Salvador (Bahia, Brazil). I will closely examine the social and health impact of the biomedicalisation of illegal abortion via self-administered misoprostol from the perspective of health professionals and low-income female users. My postdoctoral study set out to examine the experiences and attitudes of physicians and other health professionals to legal and illegal abortion in two public maternity-hospitals, namely HF and HP (De Zordo, Mishtal, 2011; De Zordo, 2012c).[4] The main topic of my PhD research was not abortion, but family planning policies and contraception (De Zordo, 2012b, 2012a). However, during the fieldwork I undertook participant observation in the Emergency Room (ER) and the maternity service of HF, where many low-income women sought post-abortion care.[5]

As I will show, illegal self-induced abortion has potentially dangerous effects for the reproductive health of low-income women in countries with restrictive abortion laws, like Brazil. In fact, these women do not have easy access to evidence-based information about safe dosage regimens of misoprostol. They also use other abortifacients and depend on post-abortion care services in public maternity hospitals, where they often face stigmatisation and discrimination.

In the conclusion, I argue that the discourse of Brazilian health professionals' and the practice of low-income women highlight the existence of a double (reproductive) citizenship regime, which creates and reinforces the social distinction between what the Brazilian anthropologist Roberto Da Matta (1997) has defined as "sub-citizens" and "super-citizens." The former are subject to the impersonal and universal power of the law and of the State, and depend, as the anthropologist Emilia Sanabria (2010) highlighted, on poor public health services. The latter can easily circumvent the law using their personal, powerful social networks and have access to the best goods and services provided by the private market, including illegal, but safe abortion.

The dangerous, double life of a global drug, from Latin America to the world

Misoprostol is a synthetic, inexpensive prostaglandin that was originally registered in many countries for the prevention and treatment of gastric ulcers and was sold in pharmacies often without a medical prescription. In 2000, the drug was marketed for ulcer treatment in more than eighty countries by the manufacturer GD Searle, under the name Cytotec (Sherris et al., 2005), but in some countries, particularly Brazil, it was already widely used to induce illegal abortions (Coelho et al., 1993; Costa, Vessey, 1993). Reproductive health providers surveyed in 2001-2002 for a study on misoprostol use in 23 countries, particularly those working in four developing countries (including two Latin American countries), observed a decrease in serious complications from unsafe abortions where women had accessed this drug (Sherris et al., 2005). However, all providers expressed concern about its self-administration and mentioned potential side effects of its misuse, such as uterine rupture, excessive bleeding, and birth defects. In fact, misoprostol's safety and effectiveness depend on dosage and gestational age and access to good post-abortion care in the event of complications.

Most Latin America countries, including Brazil, have very restrictive abortion laws and high rates of maternal morbidity and mortality due to unsafe abortion (WHO, 2011; Guttmacher,

2012), where the victims are mainly poor women. In fact, middle and upperclass women have access to illegal, but safe abortion via vacuum aspiration at private clinics, while low-income women are forced to use other procedures, without any medical assistance or supervision, and then undergo curettages in the event of incomplete abortions.[6] The most dangerous procedures involve piercing objects inserted into the uterus, caustic, vaginal douches and herbal teas that can have deadly consequences (Grimes, Benson, Singh, 2006; Gynuity, 2007; Singh, 2006).

In the early 1990s, the use of misoprostol as a safer abortifacient began to be discussed seriously, due to the effects of its illegal use by Latin American women, especially in Brazil, following the publication of two articles in *The Lancet* (Coelho et al., 1993; Costa, Vessey, 1993). The former discussed its use based on the review of the records of women admitted for post-abortion care at Fortaleza's main obstetric hospital between 1990 and 1992, and showed that many women using misoprostol had incomplete abortions. After its sale in pharmacies was suspended by the local government in July 1991, because of its illegal use, the number of women seeking post-abortion care decreased, but women continued to use it, which proved the existence of a black market. The second article discussed the different methods used by 803 women admitted to a hospital in Rio de Janeiro with abortion complications in 1991, 57% of whom reported using misoprostol. Most of them took it orally in the first four months of pregnancy in dosages varying from two hundred to 16,800 micrograms, while 29% used a combination of oral and vaginal routes. The authors highlighted the fact that a significantly smaller proportion of women taking misoprostol had signs of infection, compared to those who induced abortion by catheter insertion.

These first studies provoked an intense scientific international debate on the safety of misoprostol use and its best dosage regimens, not only in Latin America and Brazil, but globally (Blanchard et al., 2005). At the same time, misoprostol travelled around the world along with Latin American women's expertise and practices. "We have started to understand the potential of this drug and use it off-label in our hospitals, after seeing how Latin American women used it to self-induce abortion at home," the chief gynaecologist of a maternity-hospital in Barcelona explained to me.[7] Many Spanish and Italian obstetrician-gynaecologists of his generation who I interviewed over the last four years told me that they had understood the potential of this drug in the late 1990s/early 2000s, after observing how it was effectively and, in most cases, safely used by Latin American migrants to self-induce abortions without medical supervision.[8] These women used it outside the medical system, despite abortion being legally available in both countries, because they did not always know that they were entitled to legal termination and/or had difficulties in accessing health services because of their legal status as irregular migrants.[9] Furthermore, in Spain the public health system did not cover all abortion procedures until the 2010 abortion law reform.[10]

Being an off-label drug originally used by women to provoke abortion in highly restrictive settings, well-established evidence-based protocols and guidelines concerning its administration and usages did not exist until the early-mid 2000s. Nowadays, the recommended regimens for abortion induction with misoprostol alone, are three doses (800mcg each), three to 12 hours apart, up to nine weeks, administered vaginally, sublingually or orally (Gynuity, 2013a). In most European countries, where abortion is legal on broad grounds, at least in the first

trimester, misoprostol is currently used in hospitals and clinics to induce abortion along with another important, very effective abortifacient, namely mifepristone. These two drugs combined are highly effective and safe, if used according to evidence-based regimens (WHO, 2012). Their use is particularly recommended within the first seven to nine weeks of gestation. In fact, medical abortion in the first trimester, being a non-invasive, simple procedure, is very safe and has fewer potential complications than surgical abortion under local or general anaesthesia or later abortion (Hausknecht, 2003; Shannon et al., 2004).

Despite the scientific evidence gathered, in most countries misoprostol is not registered for obstetric and gynaecological use and mifepristone is still not available in most Latin American, African and South-East Asian countries (Gynuity, 2011, 2013b). In many countries, therefore, misoprostol is used alone and off-label to induce terminations or to complete incomplete terminations and miscarriages (Weeks, Fiala, Safarc, 2005). The manufacturer and patent holder, Searle, which has been incorporated into Pfizer, has not applied for licences for any reproductive health indications, as Weeks, Fiala and Safarc (2005, p.269), "probably to avoid potentially damaging discussions about the drug's use for inducing abortion," and "the outcome is the denial of access to a potentially life-saving treatment to millions of women around the world." Furthermore, very restrictive abortion laws make it difficult to access information about its effective and safe use as an abortifacient. In 2004, in Uruguay an initiative called "Iniciativa sanitaria" allowed obstetrician-gynaecologists to discuss with their patients the methods they intended to use to induce a termination, including misoprostol, despite abortion being illegal (Briozzo, 2007). However, Uruguay remains one of the few exceptions in this region. Over the last decade, only a few countries and States, such as Colombia, Mexico (DF) and Uruguay have relaxed their abortion legislation. In Chile, a new bill allowing legal abortion in the case of maternal life risk, rape and foetal malformations incompatible with life is currently being discussed in Congress, while other countries, like El Salvador and Nicaragua, have made abortion illegal without any exception and have recognised the rights of the "unborn" from conception (Morgan, Roberts, 2012). Despite these legal barriers, in most Latin American countries and wherever it has been approved for ulcer treatment, misoprostol is also widely used off-label, to induce legal and illegal abortion and to perform other obstetric procedures. In some Latin American countries, such as Brazil and Peru, local pharmaceutical companies that produce misoprostol have registered it for obstetric and gynaecological use too. Misoprostol is not only safe, but also cheaper than other drugs commonly used in obstetrics, because it has originally been priced to allow its continued high dose administration of 800Ag (four tablets) daily to prevent gastric ulcers (Weeks, Fiala, Safarc, 2005).

In Brazil, misoprostol is produced by Hebron Pharmaceuticals and is registered for labour induction, intra-uterine foetal death, and induced abortion. While in many countries, it is sold in pharmacies and sometimes without a prescription, since 1998 in Brazil it can only be purchased through hospitals, with specific governmental approval. As a result, there is a flourishing black market for misoprostol. The main problems of the informal sale of misoprostol are the lack of reliable quality and its price (Gynuity, 2007). In the mid-2000s in Brazil, Colombia, Mexico and Peru the price of misoprostol on the black market ranged from US$1 to $30 per pill. In Brazil, in the mid-2000s misoprostol was sold to women by a

wide range of people, from pharmacies and travelling salesmen to traditional healers and midwives ("parteiras"). Sometimes it was also bought via the internet. Its cost varied greatly by region, from US$10-12 per 200mcg pill in the north-eastern state of Pernambuco to $20-30 in São Paulo. On the formal market, misoprostol was and still is much cheaper, costing approximately $5-9 per 200mcg pill and $2 per 25mcg pill (Gynuity, 2007).

In a recent article, Débora Diniz (Diniz, Madeiro, 2012), a well-known anthropologist who has been doing extensive research on illegal abortion in Brazil over the past decade, examined the illegal trade of misoprostol and particularly ten cases that came to the attention of the Public Prosecution Service for the Federal District between 2004 and 2010. She discovered that most drug vendors worked at community drugstores and instructed women on how to use the drug and how to prevent infections. However, they refused to provide them with care in case of emergency. She also established that the main causes for maternal mortality were the delay in seeking medical care, due to women's fear of prosecution, and the use of misoprostol along with other high-risk methods, such as vaginal probes.

A national abortion survey carried out in 2010 in the main Brazilian urban regions with 2002 literate women aged 18-39 (Diniz, Medeiros, 2010), showed that 15% of them had had an abortion and half had used some kind of drug to induce it. The following, qualitative phase of this study in five state capitals, conducted via structured interviews with 122 women who had an illegal abortion, showed that the most frequently used drug was misoprostol (Diniz, Medeiros, 2012). Women under 19 years of age who already had children reported the majority of abortions and a higher incidence was found among "black" women.[11] Most women reported that they had been helped by a relative or their partner, and had used a combination of herbal teas and misoprostol. Private clinics were used less by women with low educational background and more by women with a higher educational status. For each "white" woman who was hospitalised for post-abortion care, three "black" women were hospitalised. Of those who went to a private clinic, 93% had not sought medical assistance, while 47% of those who used misoprostol alone did. However, women went to the hospital only in case of intense and prolonged bleeding and unbearable cramps, after waiting for the time they considered necessary (four to six hours) for misoprostol to be absorbed, to be sure that physicians could not find any trace in their vagina or in their blood.

At the hospital, most teenagers confessed they had induced an abortion and reported being badly treated by physicians. Some felt morally sanctioned, and in some cases physicians threatened to denounce them; others reported being placed in rooms with women who had given birth, and/or waiting for hours before being attended. Older women resisted medical inquiries more than younger women and usually described their abortion to physicians as a miscarriage due to a fall or a "susto" (fright). Young women also used more herbal teas or other, unsafe methods, like vaginal probes inserted by "aborteiras" (backstreet abortionists) than misoprostol. As a result, they reported seeking post-abortion care at the hospital more often than older women. Finally, ten women had a termination by themselves, without any help. Most of them were "black," young and with a low educational level.

As this study shows, in Brazil young, "black" women with low educational background use more dangerous and risky methods to induce abortion. These women are the main victims of unsafe abortion in Salvador (Bahia), where maternal morbidity and mortality

rates due to unsafe abortion are very high and abortion has been the first isolated cause of maternal mortality over the past two decades (Menezes, Aquino, 2001; Menezes, 2006). However, since misoprostol use as an abortifacient has become widespread, mortality rates due to unsafe abortion have decreased in Brazil as well as in other countries (Coelho et al., 1993; Miller et al., 2005).

Since 2005, several servers have been developed to provide evidence-based information about medical abortion and make scientific information on misoprostol use available in countries with restrictive abortion laws, like Brazil. One of them, "Women on web," helps women to access medical termination up to nine weeks of pregnancy, by providing not only information and on-line clinical advice and assistance in restrictive, legal settings, but also by shipping a drug kit for early medication for abortion to all women requesting it in exchange for a nominal donation.[12] Another increasingly popular website, www.medicationabortion.com, a project undertaken by Ibis Reproductive Health and the Office of Population Research at Princeton University, is a medically accurate, multilingual online resource dedicated to early pregnancy termination regimens, available in English, Spanish, French and Arabic. The 1910 emails submitted to the website from 2005 through 2009 originated from more than forty countries and territories, but most were sent from the United States, Latin America and the Arab world (Foster, Wynn, Trussell, 2014). More than 80% of emails received from Latin America concerned the use of misoprostol alone for early pregnancy termination (Gynuity, 2013a).

To my knowledge, there are no published data or existing studies on Brazilian women's use of the internet to get information on misoprostol. In 2002-2005, when I did my PhD research in Salvador, these servers did not exist yet and women living in the peripheral neighbourhoods where I did my fieldwork could not easily access the internet. Nobody had a computer at home and getting access to the web was an expensive hobby for the women I met, who were either unemployed or had irregular, underpaid jobs as domestic workers and had a family to take care of. They usually did not get information about misoprostol via the internet, but they used it widely to self-induce abortion and many sought post-abortion care at public maternity-hospitals.

Women's experiences with illegal abortion and misoprostol on the outskirts of Salvador

Silvania[13] had worked as a social worker at the primary health centre of the peripheral neighbourhood of C. (where I conducted most of my PhD fieldwork) from 1996, when a law on family planning was enacted, to early 2000, when the responsibility for the administration of free public family planning services passed from the State to local municipalities. In 2001, she started work at the municipal department of health administering all health services in the large, poor health district of "Subúrbio," which at the time contained 317,848 inhabitants and a very high population density of 4974 people per km^2. This densely populated area had eight recently reformed primary health centres, called "family health centres," set up to provide access to the most used cheap contraceptives, such as condoms, second-generation hormonal pills and hormonal injections. However, at that time, family planning was only provided by three of the eight health centres. Moreover, there were limited resources and

serious problems with contraceptive distribution; therefore, not all contraceptives were always available. Furthermore, in most health centres there were no trained physicians able to insert IUDs. According to Silvania and to most social workers I interviewed at HF, men's resistance to condom use was another problem that family planning centres did not always address, and the result was frequent unwanted pregnancies and illegal abortions.

"In the neighbourhood of C., abortion is very common," Silvania explained, "particularly with Cytotec, which is sold on the black market even though it is prohibited." Despite being commonly used, unsafe abortion and the use of misoprostol were never discussed at the local family planning services. Abortion was the elephant in the room, always present in the minds of women and health professionals, but rarely mentioned. Barbara, a "black"[14] woman aged 25, mother of a 6 years old child who I met one day at HF, asked the gynaecologist if she could take a pregnancy test because her menstruation was late.[15] She explained that she had taken three monthly hormonal injections, her favourite method, but they were not available at local family planning services, and she could not buy them because they were too expensive, so she had started using condoms, but not always, because she and her husband did not like them.[16] The doctor, an experienced female gynaecologist who had dedicated most of her professional life to family planning, commented sadly: "we do not have enough methods here to provide them, and they do not use condoms. What can we do?" After the visit, Barbara told me that had she been pregnant she would have terminated her pregnancy using Cytotec. However, she added, Cytotec was very expensive, R$20 per pill, and she and her husband were unemployed: "what am I going to do?" she asked, which was a difficult question and one that I could not readily answer.

Like many women I met during my PhD fieldwork at the hospital and in the neighbourhood of C., Barbara knew how and where she could find Cytotec as well as other, non-medical abortifacients. However, as abortion is a highly sensitive, difficult and dangerous subject, she would not discuss those issues with her gynaecologist, nor would she discuss them in detail with me. Most women I met were young "black" women in their twenties, like Barbara, and did not like talking about this topic, because they feared that somebody, such as family members or neighbours, would listen to our conversations. However, many told me that they knew somebody who had induced an abortion and had died or nearly died because of it. They were usually adolescents or young women who had not told their families what they intended to do, had used unsafe methods, such as poisons or vaginal probes, and had not sought medical assistance for fear of prosecution. Most young women knew a number of non-medical methods that older women, their mothers or neighbours, used to "clean the belly," as they said, or "make menstruations come," or "abortar" (induce an abortion) such as herbal infusions of "arruda," "tapete-de-oxalá" and other herbs. However, they would not talk openly about their own experiences or say where one could find Cytotec and how one had to use it, and I did not insist on asking. In fact, a woman was arrested for providing illegal, unsafe abortion with probes in that area of the city when I started my fieldwork and the news had been published in local newspapers (Mulher acusada..., July 25, 2003), so abortion was more than ever a taboo topic. Only one young woman, a mother of two that I knew pretty well, told me one day that she had tried to terminate her second pregnancy using Cytotec in a moment of despair, but she had not been successful. Her husband was

working in another state and his mother and sister, with whom she lived, did not like her and did not accept her pregnancy. She finally had a pre-term birth and her son suffered from non-specified neuronal and cognitive problems probably because of that.

Unlike in the neighbourhood, at the hospital's family planning and maternity service I talked to twenty women while they waited to be discharged. Most were young "black" women in their early twenties and they all shared with me part of their experiences with abortion via self-administered misoprostol. As Cytotec was expensive and available only on the black market, most of them had initially tried to induce a termination using herbal teas. In most cases, these teas had been ineffective, in their opinion because their pregnancy was more advanced than they suspected. All agreed that herbal infusions worked only in the first three months of pregnancy, while Cytotec was more effective after that. Most women had therefore bought and used four misoprostol pills, two or three vaginally and one or two orally, and had only used more if the first dosage was not effective. They had then sought medical assistance when bleeding and pain had become unbearable. Many women complained that auxiliary nurses, and sometimes physicians as well, had treated them badly at the ER, putting them under pressure to know how they had induced the abortion and making them wait for many hours. Some had considered going to a private clinic to avoid that, but terminations were too expensive there. A minority had also considered the possibility of going to local "aborteiras". A young woman, Lucinete, had visited an "aborteira" who had showed her a probe and explained that after inserting it in her uterus she would send her home and would not take care of her afterwards. Lucinete feared for her life and ran away, because she knew a young 16 years old woman who had used another unsafe method, potassium permanganate,[17] and had died. She was afraid of using any method other than Cytotec, which she considered the safest, most effective abortifacient.

Tensions at the Emergency Room: perspectives of social workers *versus* physicians regarding self-induced abortion

As Graça, a social worker who worked at HF, told me, misoprostol was expensive, causing some women to use dangerous methods: "Here, people act irresponsibly," she said, "the 'curiosas' (backstreet abortionists), the neighbour who taught them, without any safety precautions."[18] Then she added "despair generates misery. Poverty here is very high and this provokes women's despair. Some women put 'chumbinho' (rat poison) in their vaginas, they get poisoned and die." Debora, another social worker who helped the Hospital Director to collect epidemiological data, explained to me that they performed eight curettages per day on average,[19] and confirmed what the women told me: they used teas made of herbs such as "espirradeira" that can sometimes have deadly consequences. They had recently had a case of a woman who died after drinking this herbal tea or other herbal concoctions, such as "alumá" and "tapete-de-oxalá," but Cytotec was the abortifacient most used and was easily accessible on the black market.

All of the social workers at HF were born and grew up either in or close to the area of "Subúrbio," so they were familiar with the difficult living and working conditions of the people living there. Moreover, they had witnessed several deaths of women due to unsafe

abortion. This is why they were all in favour of the legalisation of abortion. On the contrary, only a minority of physicians working there and at the other hospital (HP), which provided a legal abortion service (unlike HF), were in favour of the legalisation of abortion, particularly the most experienced ones who had seen many women dying from unsafe abortions and/or had already performed legal terminations. Among the youngest physicians, the most liberal ones were those who had started to work when the Ministry of Health passed regulations to establish and enhance legal abortion services and improve the quality of post-abortion care (Brasil, 1999, 2005), like doctor Jorge, and those who provided legal terminations, like doctor Estela. However, many young physicians were concerned that the legalisation of abortion would "trivialise" it, because women would use abortion "as a contraceptive," as they already did, in their opinion. Moreover, the legalisation of abortion would cause public maternity-hospitals to collapse.

Most physicians were from middle- and upper-class families and had not grown up in the poor neighbourhoods where the patients they visited at public hospitals ER came from. Many of them, especially those with a more conservative attitude towards abortion, distinguished these women, whom they labelled as "irresponsible" because "they used Cytotec as a contraceptive," from their patients at private clinics and hospitals, who were "more responsible."

For instance, doctor Luisa, an experienced obstetrician-gynaecologist in her fifties talking about misoprostol use who worked at HP, said: "It is a very irresponsible issue… a trivialisation of their body, of their health… of sex… they commonly have different partners… and when they get pregnant they don't know who the father of the child is… I tell them that abortion is not a contraceptive."[20] Other physicians agree with her. "The contraceptive method most used here," explained doctor Katia (HF), "is Cytotec, which is very expensive and not on the market, while they could use the day-after pill which is less expensive."[21] One of her colleagues, doctor Joana, a female obstetrician in her forties, added: "they provoke more abortions than those they could prevent. It is not lack of information, but lack of care: they think it is easier. I see fewer women getting to private hospitals with an incomplete abortion. It is more a question of education, of cultural level."[22] When I told her that I had observed that local family planning services were not always efficient, she commented: "Some patients say they have no money for the pill, but they have earrings."

Only a few physicians mentioned the lack of resources of public family planning centres and the limited participation of men in contraception, as well as the fact that the morning-after pill was not available in most health centres. Moreover, some physicians refused to prescribe it. Doctor Marcelo, for instance, an old, experienced physician who worked at HF, was against abortion, and did not prescribe the morning-after pill either because of his religious convictions. Doctor Marcelo and doctor Katia were "espíritas"[23] and would perform an abortion only in the event of life risk. They both got really angry with patients who arrived at the ER bleeding as a result of a self-induced abortion, particularly if they were at an advanced gestational age.

"One got herein (the) sixth month of pregnancy with a foetus weighting 700g that survived," doctor Marcelo told me. "That woman had taken Cytotec" added doctor Katia "and the foetus was already in her cervix. Something as big as this (she showed me the

dimensions of the foetus with her hands). Something like that changes the mood of medical staff for the entire day."[24] "Here there are a lot of abortions," said doctor Marcelo, "they say it has been a 'susto' (fright), so it's been a 'sustotec' (fright + Cytotec = 'Frightotec'), or they have fallen, so I ask them if they have fallen on a Cytotec box." Like most of his colleagues, when he suspected that a woman had induced a termination, he asked if and how she had induced it, to be sure that she had not used any dangerous method. "If they use a tea of 'espirradeira' that is a poison, they may die," he explained. Once he had called the police because a woman had died after using a vaginal probe, so he sent them to arrest the backstreet abortionist who had induced her abortion, after obtaining her name from another woman with an infected and incomplete abortion. Most physicians said that they put women under pressure and called the police only in those cases, or when a woman arrived at the hospital with the signs of a late abortion, but without any foetal remains. Otherwise, they did not do that to avoid "exposing" themselves and their patients.

However, many acted as if they were police officers during the first visit to the emergency room, not only to save these women's lives, but also to protect themselves in the event of complications. For this reason, many physicians would write "provoked abortion" in the medical records of their patients', although it is not always easy to understand whether it was a miscarriage or not. Most physicians expressed relief when they could find traces of misoprostol in their patients. However, many pointed out that women sometimes used excessively high dosages, and/or used it at advanced gestational stages, which could provoke a uterine rupture and dangerous infections.

Dying from unsafe abortion or from medical negligence and "institutional violence"

In the reports of obstetrician-gynaecologists, misoprostol emerged as a drug with a double life. On the one hand, it was seen as a life-saving remedy that physicians could use in cases of post-abortion infection. On the other hand, it was seen as an "easy," albeit potentially dangerous, method for self-inducing illegal abortion that was much safer than other, more dangerous methods, like uterine manipulation or poisons. However, it was still dangerous if used by women in the wrong dosages or at advanced gestational ages, without any medical guidance. Only one case of maternal mortality following self-administration of misoprostol was reported by physicians at one hospital (HP), but it was not clear whether the woman had also used other methods or not. Doctor Luisa, an experienced obstetrician-gynaecologist in her fifties, had been shocked by the death of this woman, an episode that other physicians also recalled: "Here, in this maternity service," she told me, "I saw a girl… I think she was 23 years old... she was already 20 weeks pregnant… she used 25 Cytotec pills… following a friend's suggestion… and she stayed home… I don't know how many days, maybe for two or three days. She came here at 13:00 and she was only attended at around 18:00. This was a serious failure of the system… many times the patients' conditions require hospitalisation… when I got here she was already in a state of septic shock… she fainted… her blood pressure dropped. I recall that I contacted her relatives… her mother didn't know… her sister didn't know… this patient was transferred from here… at 1:00… to a maternity hospital… she got there and she died at 5:00... So, very serious things can happen… actually I have my doubts,

I asked the maternity hospital many times to get the autopsy results… because I don't believe the story of the 25 pills… I don't know if there has been manipulation."[25]

This woman's death seemed to be due more to medical negligence, or "institutional violence," as another gynaecologist, doctor Arthur, defined it,[26] than to the use of misoprostol without medical guidance per se, or possibly a combination of these two factors. In fact, some physicians, particularly those with more conservative attitudes towards abortion, would leave women with incomplete abortions waiting for hours to punish them. Doctor Luisa was one of those physicians: "when a pregnancy is more advanced… 14-15-16 weeks … sometimes they are not bleeding… and they are feeling strong pain… so we know that she used medication... we ask her and she confirms it… so I tell them that they must wait … that if she made the option of terminating a pregnancy she must wait… because I can't hospitalise her and provide her with an abortion at the hospital… if she isn't bleeding… if her uterine neck is not open… if she has not had an incomplete abortion… I say that I am very sorry… and that they must 'suffer' their pain."[27] However, doctor Luisa would not hesitate to use misoprostol to complete an incomplete abortion in case of life risk. For instance, she had once given antibiotics and used "the famous medication, Cytotec" to provoke elimination of the foetus in one of her patients who had a severe infection, because she had used a probe to induce the abortion. She did it despite the "ethical dilemmas" generated by the fact that she did not have a scan, so she did not know if the foetus was still alive or not.

As these examples show, the negligent and often discriminatory attitude of some physicians, particularly the most conservative ones, can sometimes have fatal consequences. This attitude is the result of the strong stigmatisation of self-induced abortion via misoprostol,[28] labelled as the "easy solution" chosen by young, low-income women, who are stigmatised for their "irresponsible" sexual behaviour and limited use of contraception that only women, not men, are considered to be responsible for. Another problem highlighted by older gynaecologists was that young physicians, who had not seen many women die from unsafe abortion, did not always understand that their patients' lives were at risk and intervened when it was too late.

Final considerations

The history of misoprostol shows that globalised biomedicine does not always travel from a putative "northern" centre to its "southern" periphery, and that the centre is increasingly global in its own right. The global biomedicalisation of abortion via self-administered misoprostol occurred without legal approval and medical guidance, thanks to the initiative of Latin American women and drug sellers living in countries with restrictive abortion laws, like Brazil. The company that originally produced misoprostol did not contribute to make it more easily accessible, refusing to register it for obstetric use, while profiting from the "conversion" and increasing popularity of this drug, not only among women living in countries with restrictive abortion laws, but also within the global, medical community. However, feminist and medical organisations have been able to mobilise their resources and creativity to test its efficacy and safety and establish the best dosage regimens, and to make this information accessible to women living in restrictive legal settings via the internet. At

the same time, obstetrician-gynaecologists throughout the world have started to use it off-label for a number of obstetric procedures.

As a result, maternal mortality rates have decreased in countries with restrictive abortion laws, like Brazil, and its wider use may further contribute to make them decrease globally even further (Harper et al., 2007). However, biomedicalisation is stratified and has different social effects in different countries and social contexts (Clarke, 2003). In countries with restrictive abortion laws and deep social inequalities like Brazil, the lack of legal access to misoprostol and to information on its safe use makes its purchase sometimes impossible and its use dangerous for low-income women. Furthermore, as Diniz' (Diniz, Madeiro, 2012) research and my research in Salvador show, the lack of good quality post-abortion care services contributes to make its use potentially dangerous. In fact, low-income women often use misoprostol along with other, unsafe abortifacients and when they seek medical care they are often stigmatised and discriminated against by physicians and other health professionals with conservative attitudes to abortion.

As the cases discussed above show, maternal mortality following illegal abortion is not only due to unsafe procedures or to the misuse of misoprostol, but also to the strong stigmatisation of abortion and to the "institutional violence" that low-income women face at public hospitals.

The most conservative gynaecologists that I interviewed distinguished between different kinds of birth control techniques and women at the same time. In their opinion, middle and upper class women use contraception more effectively and avoid unwanted pregnancies and illegal, unsafe procedures. On the contrary, their "irresponsible," low-income female patients at public hospitals used misoprostol "as a contraceptive" and then sought post-abortion medical help, making public maternity services collapse. These "bad patients" should be punished because they could have used other legal pills (hormonal pills and the morning-after pill). Only a minority of physicians, those in favour of the legalisation of abortion, as well as social workers, mentioned the deep gender and social inequalities that make contraception difficult and much more accessible to middle and upper class women at private clinics, which also provide illegal, but safe abortion.

The stigmatisation of abortion and particularly of self-induced abortion via misoprostol can be considered a perverse effect of the biomedicalisation of contraception available in public family planning services. This is because it has made unwanted pregnancy and abortion less morally and socially acceptable in Brazil as well as in other countries with more liberal abortion laws, including European countries (Bajos, Ferrand, 2002; De Zordo, forthcoming 2016a; forthcoming 2016b). At the same time, it can be considered the result of the double citizenship regime examined and discussed by Sanabria (2010), which is reproduced and reinforced in Salvador's public hospitals. Physicians distinguish their poor patients as "sub-citizens" depending on the black market, backstreet abortion and public post-abortion care services, from their private patients. The latter are "super-citizens" who are "above the law" and can easily access the private health market providing the best medical services and techniques, including safe abortion. We may argue that the globalisation of misoprostol as an abortifacient and an eclectic obstetric tool has created a globalised double (reproductive) citizenship regime. This is achieved by creating a distinction between women who can legally

and safely (and freely, in many countries where abortion is legal) access to this drug and low-income women who cannot. This is either due to the illegal status of abortion or because of their irregular/illegal status as migrants in countries where abortion is legal.

NOTES

[1] In this article, I use fictitious names and pseudonyms when referring to the hospitals where I did my fieldwork and for my interviewees to protect their anonymity. All translations from Portuguese and Spanish to English are mine.

[2] Interview with doctor Estela, HP, Oct. 8, 2009.

[3] Interview with doctor Jorge, HF, Oct. 1, 2009.

[4] My postdoctoral study was approved by the Ethics Committees of Columbia University and of the Public Health Institute at Federal University of Bahia as well by the Brazilian National Ethics Committee. A questionnaire was applied and semi-structured interviews were conducted with 25 health professionals (13 obstetrician-gynaecologists) in a public hospital (HP) providing legal abortion and with 20 health professionals (nine obstetrician-gynaecologists) in another hospital that does not provide this service (HF). HF was located in a peripheral, poor neighbourhood, while HP was located in a middle-class neighbourhood surrounded by working-class neighbourhoods.

[5] My PhD research project was approved by the Hospital Director. At HF, I observed the daily activity of the family planning and the maternity service two to three half-days a week in 2003-2004, during two periods of six months each, and during a final month in 2005, and had informal conversations with twenty female patients. I also conducted unstructured interviews with six obstetrician-gynaecologists and four nurses and social workers in charge of these services. In the neighbourhood of C. I did participant observation and had informal conversations with the inhabitants of six households, who lived in two streets located close to the central square where the market, the public school, the health centre and the main churches were located. I also recorded their life stories, focusing on women's reproductive and contraceptive experiences, and conducted unstructured interviews with 11 women.

[6] At HF and HP, vacuum aspiration, which is the safest and easiest surgical abortion technique in the first trimester, was not well known and curettage was the norm in the event of incomplete abortion.

[7] Interview with doctor Roberto, Apr. 24, 2014, Hospital N., Barcelona. I recently completed a qualitative study on abortion and conscientious objection from the perspectives of health professionals in Spain, more specifically in Catalunya, where I have carried out my research at two maternity-hospitals in Barcelona and a private abortion clinic subsidised by the State between 2013 and 2015. During this period I have also collected national and regional data on abortion in Spain and Catalunya as well as articles on abortion related issues in the media. Finally, I have participated in the scientific and political debate on the reform of the abortion law proposed by the conservative government in 2013. Last year, the heated political debate provoked by this law project divided the conservative government, leading to the suspension of the parliamentary debate and to the resignation of the minister of Justice who had proposed it.

[8] In 2011, I conducted a postdoctoral study funded by a Marie Curie Fellowship on the experiences and attitudes to abortion of health professionals and conscientious objection in Italy. It was carried out in four public maternity-hospitals located in Milan and Rome via questionnaires and in-depth interviews with 27 obstetrician-gynaecologists in each city and a sample of other health professionals. I also participated in the scientific and political debate on abortion and conscientious objection in Italy in 2011 and 2012 and during this period I collected media articles as well as data on abortion in Italy (De Zordo, Oct. 2015; forthcoming 2016a; forthcoming 2016b).

[9] There are no studies or reliable data on the illegal use of self-administered misoprostol by Latin American migrants in Europe. In Italy, the Ministry of Health estimates that between 12,000 and 15,000 were illegally performed between 2005 and 2012, but does not clarify what this actually means (Italia, 2015). Cases of physicians illegally providing abortion in exchange for money at private clinics as well as cases of immigrants using self-administered misoprostol to terminate their pregnancy are discussed in the Italian media from time to time. Further studies are needed to provide reliable data on this phenomenon.

[10] According to the physicians I interviewed in Spain, since the abortion law reform passed in 2010, women do not seek to self-induce abortion illegally anymore. More research is needed to confirm this finding.

[11] I use the English term "black" to translate the term "negra" used by Diniz in her article. The term "negro/a" was used in Brazil in the nineteenth and early twentieth century not only by racist scientists but also in common language to define African slaves and their descendants. After being abandoned for a few decades along with the idea that "human races" exist, it has been re-introduced in the 1980s by the Black Movement to denounce racism in Brazil and, at the same time, express and assert "black" people's pride in their African origins. Nowadays, in Brazilian official statistics and in the social sciences and public health articles it is often used to refer to people who define themselves not only as "negro" or "preto" (black, in English), but also as "moreno" or "pardo" (brown, light brown or mixed race, in English). Other terms used in official statistics and academic articles to refer to people's colour are: "pardo" (brown, light brown), "branco" (white), "amarela" (yellow) and, bizarrely because it is not a colour, "indígena" (indigenous).

[12] The WoW website is owned by Women on Web international, a non-profit foundation that supports women's access to safe medical termination. The website, which went online in April 2006 and is available in English, Spanish, Portuguese, French and Polish, also provides related educational information. See Gomperts et al. (2008).

[13] Interview with Silvania, Headquarters of the "Subúrbio" Health District, Mar. 25, 2003.

[14] I use the English term "black" to translate both "morena" and "negra" (see note 11). These are the two terms that most women I talked to during my PhD fieldwork adopted to define their own colour.

[15] Field-notes, HF, Apr. 2, 2004.

[16] It was unclear if both, or one more than the other, disliked the condom.

[17] Normally used as a bactericidal and fungicidal agent in air wash systems, drinking water, and cooling towers. If ingested, it is a deadly poison.

[18] Interview with Graça, HF, Sept. 2, 2005.

[19] Interview with Debora, HF, Feb. 5, 2003.

[20] Interview with Dr. Luisa, HP, Oct. 22, 2009.

[21] Field-notes, HF, Aug. 10, 2005.

[22] Field-notes, HF, Sept. 2, 2005.

[23] The doctrine of Spiritism was codified in 1857 in the book *Le livre des esprits* of Allan Kardec (1804-1869), a French pedagogue who established the principles of this religion, which recognises the existence of a second "fluidic" body, besides the physical one, able to communicate with spirits, particularly with the spirits of the dead. Spiritists therefore believe not only in God, but also in spirits and in reincarnation as well. This religion was introduced in Brazil in 1865. The Brazilian Spiritist Federation currently has many spiritist institutions across the country, particularly charity institutions, health centres and clinics for the poorest. Spiritism is practiced by a minority of Brazilians, many of whom come from the elite and from medical or scientific professions. There is also an Association of Spiritist Doctors: http://www.amebrasil.org.br/portal/index.php. Most physicians that I interviewed had received a catholic education and were catholic, evangelical, or spiritists, but only a minority defined themselves as practicing a religion.

[24] Field-notes, HF, Aug. 10, 2005.

[25] Interview with doctor Luisa, HP, Oct. 22, 2009.

[26] Interview with doctor Arthur, HP, Oct. 8, 2009.

[27] Interview with doctor Luisa, HP, Oct. 22, 2009.

[28] A number of studies on the impact of the stigmatization of abortion have flourished over the last decade, particularly in the United States. On the conceptualization of abortion stigma, see particularly Kumar, Hessini, Mitchell (2009) and Norris et al. (2011).

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