

Characterization of women who requested a voluntary interruption of pregnancy at Hospital of Faro, Portugal

Caracterização das mulheres que solicitaram uma interrupção voluntária da gravidez no Hospital of Faro, Portugal

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Abstract

Overview and Aims: Induced abortion by women request is legal in Portugal since July 2007 until the 10th week of pregnancy- Abortion complications have dramatically dropped since then. This study intended to characterize the population of women who request for abortion at Hospital of Faro, Portugal, during a 3-year period, regarding socio-demographic characteristics, obstetric history and contraceptive choices.

Study Design: Retrospective medical record-based study.

Population: Women who requested interruption of pregnancy between July 2007 and July 2010 at Hospital of Faro.

Methods: Demographic and clinical data were collected from clinical files of women who requested an abortion at Hospital of Faro during the considered time period, and analysed with SPSS version 15.0.

Results: A total of 2214 women were included in the study, with an average age of 28.1 years (range: 13-49) and a median of 2.0 gestations (range: 1.0 - 10.0). Median parity was 1.0 (range: 0.0-8.0), and mean ratio of parity/number of gestations was 0.34 (SD = 1.4). Gestational weeks varied between 4 and 9, with most women being at the 6th (33.8%) and 7th (29.1%) week of gestation. 82% women had no history of previous induced abortions. Mean number of pregnancy interruptions (induced or spontaneous) was 1.5. Contraceptive use was reported by 61% women, who preferred oral contraceptives (29.1%), male condoms (16.2%) and natural traditional methods (1.6%). Post-abortion complications were registered in 104 women, and 8% women repeated the procedure during the study period.

Conclusions: The highest percentage of abortions occurred in the mid-range of women's reproductive years and reflects the event of unintended pregnancies even among women practicing contraception. Although these results are not representative of the Portuguese population of women of reproductive age, they provide a characterization of the profile of women requesting this procedure in the South of Portugal.

Keywords: Voluntary interruption of pregnancy; Gynecology; Reproductive Health

INTRODUCTION

Voluntary interruption of pregnancy (VIP) (also referred to as elective abortion) is the intentional termination of a pregnancy by medical or surgical means before the foetus can be viable¹. The World Health Organization (WHO) has estimated that about 44 million induced abortions take place annually worldwide, about 50% of which are unsafe^{2,3}, despite the advances made

in the past two decades concerning health evidence, technologies and human rights rationale for providing safe, comprehensive abortion care. According to the WHO report in 2008², the global unsafe abortion ratio was 13% in the developed countries and 21% in the developing countries.

In Portugal, a long path was taken before a slowly changing public opinion culminated in the legalization of abortion in 2007. Ethical discussions involving the media, the Catholic Church, law specialists, journalists and medical practitioners were frequent since the early 1980s and culminated in two national referendums, in June 1998 and February 2007, with divergent out-

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comes. Despite neither reached the quorum of 50% of electors participating in the vote needed for a legally binding result, while at the first referendum 51% of the people who participated voted “No”, at the last referendum 59.2% of the voters accepted legal induced abortion up to ten completed weeks⁴, as long as it is performed in a Portuguese official health facility⁵. The Parliament amended the abortion law accordingly in April 2007, and the new law came fully into effect in July 2007. According to the last data from 2009, no maternal deaths due to legal induced abortion have been reported in Portugal since July 2007, and abortion complications have dramatically dropped³.

The present study intends to characterize the population of women who attended the Reproductive Health appointment at Hospital of Faro, Portugal, during a three-year period with the purpose of performing a VIP. This characterization included not only socio-demographic and obstetric parameters, but also contraceptive choices.

METHODS

This was a retrospective three-year analysis of socio-demographic and obstetric history, as well as contraceptive choices, of women who requested and performed a VIP at Hospital of Faro, Portugal, between July 2007 and July 2010. Hospital of Faro covers a local population of 253 000 people, and an estimated seasonal population of about twice that number. Women were retrospectively identified through their medical records and enrolled in the study. Socio-demographic and clinical data were also collected from the patients' medical records and included women's age, nationality, total number of gestations (including the one to be interrupted), parity, number of previous abortions, gestational week at the time of the abortion, and contraceptive use. The number of pregnancy interruptions, induced or spontaneous, for each woman was calculated by subtracting the parity from the number of gestations.

Statistical analysis

Descriptive summary of surveyed data was performed and included: estimation of mean, median, standard deviation, interquartile range for continuous variables; frequencies and percentages for categorical variables. Statistical analysis was performed in SPSS version 15.0 software.

RESULTS

The mean number of induced abortions performed *per* month in each year at Hospital of Faro suffered a pronounced increase between 2007 and 2010. A 1.8 fold increase, corresponding to an 83% growth, was registered between these two time periods, with 38.7 mean induced abortions in 2007, 61.3 in 2008, 62.3 in 2009, and 71.1 in 2010.

A total of 2432 women were initially included in the study. Ninety-four women decided not to conclude the abortion and withdrew, and 124 were excluded for having passed the legal ten completed weeks to perform it. Therefore, 2214 women were formally enrolled in the study, aged between 13–49 years old (mean age 28.1; SD = 7.0) (Table I).

The majority of women (24.2%) were in the 26–30 age group. Seventy four per cent were Portuguese, and the remaining 26% had different nationalities, mostly from East European countries (46.0%; n = 245) and Brazil (30.2%; n = 161). At the time of the VIP, women had a history of 2.0 median gestations (range: 1.0 – 10.0), including the one to be interrupted at present time. Up to 4 gestations were identified for 1.951 (90%) women, and 5 to 10 gestations were identified for 205 (10%) women. The median parity (i.e. number of live births) was 1.0 child *per* woman (range: 0.0 – 8.0), with the majority of women (92%) having up to 2 children, and a minority of women (6%) having 5 – 8 children. The mean ratio of parity/number of gestations was 0.34 (SD = 1.4), meaning that, on average, women got pregnant 3 times for each child they gave birth to. Gesta-

TABLE I. AGE DISTRIBUTION OF WOMEN WHO PERFORMED AN INDUCED ABORTION AT HOSPITAL OF FARO DURING THE PERIOD BETWEEN JULY 15TH 2007 AND JULY 15TH 2010

Age	Women, No. (%) (N=2,214)
≤15	26 (1.2)
16-20	330 (14.9)
21-25	511 (23.1)
26-30	535 (24.2)
31-35	417 (18.8)
36-40	309 (14)
41-45	81 (3.7)
≥46	5 (0.2)

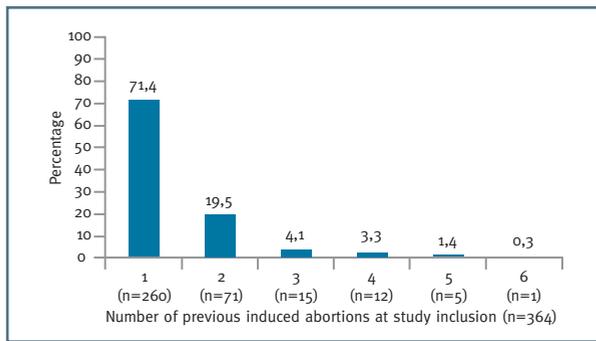


FIGURE 1. Number of previous induced abortions performed by women at study entry

tional weeks varied between 4 for 4.3% women and 9 for 6.3% women, with most women being at the 6th (33.8%) and 7th (29.1%) weeks of gestation at the time they requested the procedure. Although most women (82%; n = 1670) had no history of previous VIP at the time of study entry, 364 (18%) women had already performed at least one (Fig. 1).

The mean number of pregnancy interruptions (induced or spontaneous) was 1.5, varying between 1 for 1405 women and 8 for 1 woman (Table II). The number of previous induced abortions ranged from 1 abortion for 71% (n = 260) of women to 6 abortions for 0.3% (n = 1) of women.

Contraceptive use assessment revealed that 1353 of the 2214 women (61%) used a pregnancy prevention method, as opposed to 861 (39%) women who reported using none. As presented in Table III, the most frequently reported contraceptive method was oral contraceptive pills (29.1%), followed by male condoms (16.2%) and natural traditional methods such as periodic abstinence and withdrawal (1.6%). After the VIP, and according to the clinician’s counselling, women privileged oral contraceptives (53%), followed by intra uterine devices (16%) and implants (6%) as preferred contraceptive methods.

Post-abortion complications were registered for 104 women: 28 women had a persisting pregnancy, and 76 women had to perform a curettage. For 143 women, a cycle of medication was necessary due to uterine remnants: 120 received Misoprostol, 21 women received metil-ergometrin, and 2 women received prostaglandin F₂.

Although the majority (92%) of women performed only one elective termination of pregnancy during the study period, 8% of women repeated the procedure: 146 women performed two VIP, 12 women performed

TABLE II. NUMBER OF PREGNANCY INTERRUPTIONS, INDUCED OR SPONTANEOUS, AT STUDY INCLUSION FOR WOMEN WHO PERFORMED AN INDUCED ABORTION AT HOSPITAL OF FARO BETWEEN JULY 15TH 2007 AND JULY 15TH 2010

Pregnancy terminations, No.	Women, No. (%) (N=2,146)
1	1,405 (65)
2	561 (26)
3	123 (6)
4	34 (2)
5	15 (1)
6	6 (0)
7	2 (0)
8	1 (0)

TABLE III. CONTRACEPTIVE METHODS REPORTED BY WOMEN AT STUDY ENTRY.

Contraceptive method	Women, No. (%) (N=2,146)
None	861 (38,9)
Oral contraceptives	644 (29,1)
Male condom	358 (16,2)
Natural	36 (1,6)
Spermicide	24 (1,1)
Vaginal ring	22 (1)
Patch	21 (0,9)
Intra uterine device	14 (0,6)
Depo-Provera	2 (0,1)
Implant	2 (0,1)
Diaphragm	1 (0,05)
Vasectomy	1 (0,05)
None reported	228 (10,3)

three VIP, and 2 women performed four VIP in total. Women who repeated the procedure were generally younger than women who had only one VIP [25.8 years old (SD = 6.1) vs. 28.3 years old (SD = 7.1), p-value<0.001].

DISCUSSION

Data of abortion incidence and trends are needed to monitor progress towards improvement of maternal

health and access to family planning. In 2008, 43.8 million abortions took place worldwide, six million in the developed countries, and 37.8 million in the developing countries⁶. Worldwide, the incidence of induced abortion has remained steady in recent years after declining in the 1990s and early 2000s³. The same is not true, however, for each individual country for which information on abortion trends is available, since some have registered a decline, but a few have noted a rise in the incidence of abortion³.

Voluntary interruption of pregnancy up to ten completed weeks became legal in Portugal and is fully paid by the National Health Service (NHS) since April 2007. Before this date, illegal abortions caused several fatalities, their exact number being unknown. Maternal deaths due to clandestine abortion decreased after vaginal and/or oral Misoprostol started being used. Sometimes this drug was not prescribed but self-administered, with inevitable pernicious outcomes. Also maternal morbidity due to illegal abortion (perforation, haemorrhage, uterine infection, septicaemia, chronic pelvic pain, Asherman syndrome, psychological problems) was not rare. Maternal morbidity and mortality caused by illegal abortion were underdiagnosed and under-reported, with official data underestimating both. Frequently, it was hard to distinguish between spontaneous and induced illegal abortion complications.

Abortion levels and trends have been shown to vary across subgroups of women^{3,7}. Documentation on abortion incidence is unavailable in most countries with highly restrictive abortion laws, and quantitative information on the characteristics of women who have abortions in such countries—including their age, marital status and parity—is even scarcer. However, abortion data collection systems are in place in most countries with liberal abortion laws, and information obtained about women having abortions differs across these countries. Age is perhaps the most commonly recorded characteristic.

In this study, we intended to characterize a sample of more than 2000 women who performed a voluntary interruption of pregnancy at Hospital of Faro over a three-year period. The highest percentage of induced abortions was identified in the age groups of 21–25 and 26–30 years old, which accounted for almost half (47%) of all the abortions performed in this period. These results agree with data from 45 countries, 18 of which found that the greatest proportion of abortions occurred among women aged 20–24 (21–34%), 13 of

which found the greatest proportion among women aged 25–29 (22–34%), and six of which found the greatest proportion among women aged 30–34 (22–26%)⁸. From these data, we can see that both age-specific abortion rates and the share of all abortions by age-group are generally higher in the mid-range of women's reproductive years. In addition, adolescents, defined here as the 16–20-year-old group, account for a smaller share of abortions (14.9%) than their population size would predict, similarly to previous observations^{12,14}. The distribution of abortions by age most likely reflects a combination of two factors: the distribution of the general population across age groups, on the one hand; and the age patterns of unmet need for contraception, difficulty using contraceptive methods consistently and effectively, and the desire to avoid childbearing, on the other. Lower levels of sexual activity probably explain the relatively low incidence of abortion among adolescents, since they are more likely to have intercourse only sporadically than women aged 20–34^{9,10}.

On the other hand, the higher percentage of abortions observed in this study in women aged 21–30 years old reflect the event of unintended pregnancies even among women practicing contraception—as a result of method failure, inconsistent or improper use, or short gaps in use^{11,12}. The use of methods that are more prone to these outcomes, such as the condom and oral contraceptives, can explain some of the abortions observed for women in these age groups. In the developing world, the non-use of contraceptives leads to many—often the majority—of abortions¹³. Compared with older women, young women seem to be more susceptible to pressure from peers to have sex without contraception, and more willing to engage in unprotected intercourse¹⁴. Younger women also experience higher contraceptive failure and discontinuation rates than adult women¹⁵, and some are poorly informed about their risk of pregnancy¹⁶. In the present study, 61% of women who had an induced abortion reported the use of contraceptive methods when they got pregnant. This can be explained mainly by one of three factors: (i) women lied about the use of contraception, saying they were using contraceptive methods when in fact they were not; (ii) women had poor compliance to the contraceptives, and it was impossible to confirm that they did not have unprotected sex at least once during the previous menstrual cycle due to the fact that all the data was obtained through the patients' files and not in person. Furthermore, according to a study by

Bombas *et al.*¹⁶, Portuguese gynaecologists believe that only 2% of the Portuguese women are 100% compliant to oral contraceptives; or (iii) women were using contraception but got pregnant due to an event that compromised the effectiveness of the contraceptive method. For example, the split of a condom during sexual intercourse due to incorrect use, bad absorption of oral contraceptives by the organism due to gastroenteritis, or interactions with other drugs that compromise the efficacy of oral contraceptives (rifampicin and griseofulvin, for instance).

Induced abortions among young women may also reflect the desire to delay the start of childbearing, which comes in agreement with growing tendencies to postpone marriage and childbearing. Female fecundity declines with age after the early 20s^{17,18}, which most likely contributes in some degree to the lower abortion rates seen among older women.

The number of VIP performed at Hospital of Faro suffered a 1.8 fold increase between 2007 and 2010. Until the 22nd of April 2007 the practice of abortion was not legal in Portugal, and although the procedure was performed, it took place at unlicensed clinics. The increased number of abortions observed in this study may be the consequence of women starting to perform abortions at hospitals rather than at unlicensed clinics. No further conclusions can be drawn from this study regarding changes in the overall number of abortions performed. But it can be speculated that this increase will stabilise or even decrease over time in Portugal. A study by Sedgh *et al.*³ investigated the incidence of induced abortion worldwide between 1995 and 2008, and revealed a positive association ($p < 0.05$) between the liberalization of abortion laws and the reduction in the number of induced abortions performed. This means that the number of induced abortions performed in countries with liberal abortion laws is expected to be lower than those performed in countries without liberal abortion laws. Therefore, it is possible to hypothesise that, since the procedure is now legal in Portugal, the overall number of VIP will slowly decrease.

One of the main limitations of this study is that all data was retrieved from patients' clinical files by different doctors, not being possible to ascertain how accurate these registrations are. Another limitation of this study is that results described here are representative of the Algarve region but cannot be extrapolated to the general Portuguese population, mainly for two reasons. On the one hand, because samples included in

the study were determined by the number of identified cases that matched the inclusion criteria. On the other hand, Hospital of Faro covers a large seasonal population which is not very common in most Portuguese hospitals, as well as a large migrant population that, together, can overestimate results. For these reasons, we cannot state that the sample included in this study is representative of the Portuguese population.

CONCLUSIONS

Results of this study provide a better understanding of the incidence of voluntary interruption of pregnancy in the South of Portugal. However, additional sources of data on abortion other than medical records, along with an extended surveyed geographic area are needed to estimate the true rate of induced abortion in Portugal.

ACKNOWLEDGEMENTS

The authors would like to thank Keypoint Scientific Consultancy for the support in writing and submitting the manuscript.

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