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Contraception and sexuality after termination of pregnancy: a comparison between Lugano and Geneva

F. Bianchi-Demicheli[a], *E. Perrin*[b], *F. Lüdicke*[a], *A. Campana*[a]

[a] Clinic of Infertility and Gynaecological Endocrinology, Department of Obstetrics and Gynaecology, Geneva University Hospitals, Geneva, Switzerland
[b] Liaison Psychiatry Unit, Geneva University Hospitals and Nursing and Midwifery School "Le Bon Secours", Geneva, Switzerland

Summary

Objective: To evaluate the impact of a voluntary termination of pregnancy (TOP) on contraceptive practice and sexual well-being in women.

Study design and methods: Comparative evaluation of a retrospective study conducted in Lugano in 1995 with 85 women interviewed 3–6 months post-TOP, and a prospective study carried out in Geneva in 1998 with 103 women interviewed pre-TOP and 6 months post-TOP. In both studies TOP was performed during the first 12 weeks of pregnancy by vacuum aspiration and curettage.

Results: Oral contraceptive use in the Lugano group increased from 21% pre-TOP to 47% post-TOP, and in the Geneva group from 19% pre-TOP to 69% post-TOP. Condom use decreased in both groups. Those practising unprotected intercourse also decreased by half (around one in five). No effect on sexual well-being was reported by almost two-thirds of both groups.

Conclusions: Despite large differences between these two populations, the two studies show a similar evolution. The majority of women appeared to be able to cope well with a TOP. About one third presented sexual dysfunction.

Key words: termination of pregnancy; contraception; sexuality; sexual dysfunction; PTSD

Introduction

Switzerland, Belgium, Holland and Germany have the lowest abortion rates worldwide, less than 10 per 1000 women of reproductive age [1]. In Switzerland, this rate is estimated as 8.3 per 1000 women between the ages of 15 and 44 years [2]. In other Western European countries as well as in the United States and Canada, the rates are between 10–23 per 1000 women [1]. These recent data show the importance of access to contraceptive methods for women, prevention of abortion, and social control of the demographic evolution [1, 2]. Termination of pregnancy (TOP) is a well-studied topic that causes controversies and divides public opinion. Depending on the socio-cultural context, it has been interpreted differently, with ensuing moral debates and the introduction of new laws [3].

Recently, in March 2001, Switzerland's parliament voted to legalise abortion until the 12th week of pregnancy. In Switzerland, termination of pregnancy (TOP) is regulated by the penal code of 1942 (articles 118 and 121) and is only authorised in cases of severe risk to a woman's health, but its interpretation varies from canton to canton [4]. However, due to the current more liberal approach to sexuality, contraception, and pregnancy, public hospitals in most of the Swiss cantons now accept termination of undesired pregnancy [4]. Illegal abortions have practically disappeared and the "gynaecological tourism" of pregnant women towards either cantons with a more liberal practice, or other countries, has radically decreased [4–7]. Despite a growing liberalisation of access to TOP, their number is constantly diminishing [8, 9]. Improved sexual education and easy access to efficient contraceptive methods are at the origin of this evolution [10, 11].

This article compares a retrospective study carried out in 1995 in the Lugano Regional Hospital (Tessin) and a prospective study conducted during 1998/99 in the Department of Obstetrics and Gynaecology of the Geneva University Hospitals [12–14].

According to the most recent statistical data, the trend in the evolution of the number of TOP

in the Tessin differs from that observed in Geneva and Switzerland as a whole (table 1) [6]. In the Tessin, it increased considerably from the end of the 1970s, reached a maximum in 1991, and then gradually decreased [14]. In Geneva, it reached a peak in 1980 and has declined regularly ever since. In Switzerland as a whole, it has decreased regularly from the 1970s onwards. Until 1985, the law of 1942 was applied relatively strictly in the Tessin and it was considered as one of the least liberal cantons with few induced abortions. After that date, a more liberal approach was adopted and a relatively high number of induced abortions was authorised. Geneva has been one of the liberal cantons for much longer [4, 6].

The aim of these two studies, in Lugano and in Geneva, was to investigate the changes in contraceptive use and sexual well-being following TOP. The hypotheses were that women would use reliable contraceptive methods more regularly after TOP than before, and that their sexual life could be impaired after the intervention.

Table 1

Termination of pregnancy in Lugano (TI), Geneva (GE), and Switzerland (CH) from 1970–1994 [4].

	1970 (n)	1973 (n)	1978 (n)	1980 (n)	1985 (n)	1987 (n)	1989 (n)	1990 (n)	1991 (n)	1992 (n)	1993 (n)	1994 (n)
TI	19	81	346	391	538	477	575	608	701	652	675	574
GE	3000	3015	2784	3526	2110	2096	2177	2280	2236	2119	1882	1740
CH	16,317	16,587	15,562	15,837	14,144	12,432	12,759	12,961	12,941	12,628	12,132	11,813

Patients and methods

In a retrospective study conducted in Lugano, participants were recruited in 1995 amongst the consulting population of the Family Planning Center of the Regional Hospital [12, 14] Inclusion criteria were a pregnancy of a maximum of 12 weeks duration, no desire for sterilisation, and agreement to participate in the study. Out of the 176 women who underwent TOP, 85 accepted to participate in the study. As cantonal regulations do not allow access to medical records, no information was available concerning the women who refused to participate. TOP was carried out under general anaesthesia by vacuum aspiration and curettage. Study participants were interviewed 3–6 months after the procedure using a questionnaire on physical and psychological aspects, and their sexual life. Two doctors presented the questionnaire personally to the patients; anonymity and confidentiality were guaranteed.

In Geneva, participation in a prospective study was proposed to all women (n = 244) presenting to the Department of Obstetrics and Gynaecology in the Geneva University Hospitals or to the Family Planning Centre in 1998, who requested a TOP [13]. Inclusion criteria were pregnancy of a maximum of 12 weeks, no desire for sterilisation, and agreement to participate in the study. One hundred and fifty women complied with these conditions. TOP was carried out under general anaesthesia by vacuum aspiration and curettage. Participants in the study were interviewed 1–3 weeks pre-TOP and 6 months later using two questionnaires (open and closed questions). One hundred and three women responded to both questionnaires. Medical records were available for all women. Comparison between responders and non-responders showed that our sample is representative, except for nationality: among the 103 women, 52% were Swiss, whilst the proportion was 36.5% for the whole of the sample group (n = 244).

The same research team, a psychiatrist and a sociologist, carried out the interviews pre-TOP and post-TOP; anonymity and confidentiality were guaranteed.

All women were provided with an explanation and asked to sign a written informed consent prior to study entry, according to the study protocol approved by the Ethics Committee of the Department of Obstetrics and Gynaecology, Geneva.

The information obtained from the interview was entered directly into a software application. Data were entered twice and then screened for possible entry discordance. All women who answered the questions at both interviews were entered into the analysis.

This article deals with a non-formal comparison of two data-sets and focuses on the dimensions analysed in both studies, Lugano and Geneva. These common dimensions investigated contraceptive methods (use, type, evolution after TOP), sexual life (frequency of intercourse, satisfaction), and psychological influence of TOP on sexual life (sexual desire, orgasmic response, dyspareunia, anxiety about sexual intercourse).

Questions on sexual function as well as other qualitative aspects of the women's emotional and psychological status were assessed on four-point Likert-type scales quantifying varying degrees of agreement with a given statement. Anxiety towards sexual intercourse was coded dichotomously (yes/no); the frequency of intercourse was rated as a monthly mean. To compare paired binary data, we used the McNemar test. The level of significance was set at $p < 0.05$. Retrospective data from Lugano are presented descriptively.

Results

The study populations interviewed in Lugano and Geneva were not identical (table 2). Although the mean age was the same, the population of Lugano included more married women (42%) than that of Geneva (24%), slightly more women of middle social and economic status, slightly fewer of lower social and economic status, and fewer students. Patients in Lugano had more chil-

dren in general and were less likely to have had repeated TOP. The greatest difference concerned the proportion of Swiss and non-Swiss patients, 87% of Swiss women in Lugano as compared with 52% in Geneva.

In the Geneva study, the contraceptive methods were classified into 3 categories: methods generally counselled by physicians, gynaecologists, nurses or family planning counsellors (pill, minipill, Depo-Provera, condom, IUD); other methods (eg, coitus interruptus, periodic abstinence, spermicides); none. The results showed that 98% of women had practised one or more counselled contraceptive method since the onset of sexual activity. This question did not figure in the questionnaire used in Lugano.

Differences and similarities in the use of contraceptive methods pre- and post-TOP can be observed (table 3). More than half of the patients requesting a TOP had used a counselled contraceptive method before becoming pregnant: 54% in Lugano, 56% in Geneva. In both regions one patient in five used oral contraception, and a third had used a condom. More than half of the induced abortions were for pregnancies caused by failed contraception (use of a generally counselled method during the cycle that resulted in pregnancy) and/or lack of appropriate contraceptive advice. On the other hand, differences appear between the two regions concerning the other half of the patients. Those who had used contraceptive methods of low efficacy (coitus interruptus, spermicide, periodic abstinence) were less numerous in Lugano (2%) than in Geneva (13%). However, those who had practised unprotected intercourse were more numerous (44%) in Lugano than in Geneva (31%).

Data analysis post-TOP (3–6 months in Lugano, 6 months in Geneva) showed a similar evolution of contraceptive practice in both groups. Oral contraceptive use more than doubled in Lugano (from 21% to 47%) and more than tripled in Geneva (from 19% to 69%); condom use decreased in both groups. The proportion of women practising unprotected intercourse decreased by half with slightly more than one woman in five continuing to use no contraception. Of note was the increase in the Lugano group of those resorting to ineffective contraceptive methods (2% pre-TOP to 20% post-TOP), whilst in Geneva it decreased significantly (from 13% to 1%).

Similarities and differences can also be observed in the evolution of women's sexual life after a TOP (table 4). Approximately two-thirds of

Table 2

Demographic data: comparison Lugano–Geneva.

Demographic data	Lugano (n = 85)		Geneva (n = 103)	
	%	n	%	n
Single	43.5	(37)	65	(67)
Married	42.4	(36)	24.3	(25)
Separated/divorced	12.9	(11)	10.7	(11)
Widow	1.2	(1)	–	(–)
Higher social and economic status	2.3	(2)	3.8	(4)
Middle social and economic status	35.3	(30)	26.2	(27)
Lower social and economic status	23.5	(20)	32.0	(33)
Students	11.8	(10)	28.1	(29)
Housewives			7.8	(8)
No indication	8.2	(7)	1.9	(2)
Mean age	27.1		27.0	
Children (mean)	0.81		0.56	
Swiss	87	(74)	52	(54)
Non-Swiss	13	(11)	48	(49)
One or more TOP	15.3	(18)	33	(34)

Table 3

Evolution of use of contraceptive methods: comparison Lugano–Geneva.

Contraceptive methods	pre-TOP				6 months post-TOP			
	Lugano		Geneva		Lugano		Geneva	
	%	(n)	%	(n)	%	(n)	%	(n)
Hormonal contraception	21	(18)	19	(20)	47	(40)	69	(71)
Condom	33	(28)	37	(38)	15	(13)	10	(11)
IUD	–	–	–	–	–	–	4	(4)
None	44	(37)	31	(32)	18	(15)	16	(16)
Other	2	(2)	13	(13)	20	(17)	1	(1)
Total	100	(85)	100	(103)	100	(85)	100	(103)

Table 4
Sexuality after TOP: comparison Lugano–Geneva.

Sexual symptoms		None		Same		Increased		Decreased		No reply	
		%	(n)	%	(n)	%	(n)	%	(n)	%	(n)
Sexual desire	Lugano	–	–	63.5	(54)	5	(4)	29.5	(25)	2	(2)
	Geneva	1	(1)	70	(72)	9	(9)	18	(19)	2	(2)
Possibility of reaching orgasm	Lugano	–	–	62	(55)	1	(1)	19	(16)	18*	(15)
	Geneva	2	(2)	70	(72)	2	(2)	17	(18)	7**	(7)
Dyspareunia	Lugano	65	(55)	–	–	12	(10)	2	(2)	21*	(18)
	Geneva	65	(67)	12	(13)	12	(12)	1	(1)	10**	(10)

* 14 patients were unable to reply as sexual life had not yet been resumed.
** 10 patients were unable to reply as sexual life had not yet been resumed.

women reported no change, either in sexual desire, or in their orgasmic response, or concerning possible pain during sexual relations (dyspareunia). Differences appear between those who did report changes. A decrease of sexual desire was reported by 29.5% in the Lugano group compared with 18% in Geneva group. In Lugano, women were also more numerous in refusing to reply to questions concerning their orgasmic response and dyspareunia during sexual relations (18% and 21%, respectively) compared with those in Geneva (7% and 10%, respectively). These non-responses can be explained in part by the fact that a certain number of women had not yet resumed their sexual life (16% in Lugano, 10% in Geneva), and thus could not reply to these questions.

From a psychological point of view, the majority of patients in Lugano (93%) and in Geneva (89%) appeared to have coped well with the procedure and presented no psychiatric symptoms. The patients who did present with psychiatric problems (7% in Lugano, 11% in Geneva) noted sadness, fatigue, increased anxiety, sleep disturbances, appetite disturbance, and complained of distressing recollections of the TOP, accompanied by neuro-vegetative symptoms. In Geneva, before TOP 20% of patients experienced anxiety about sexual intercourse. After TOP, 24% of the women reported anxiety about sexual intercourse. Ten percent were not anxious after TOP, but 14% of those who reported no anxiety before the procedure did so after TOP. And in Lugano 18% of the women reported anxiety after TOP. According to the Geneva data, increased anxiety after TOP was associated with sexual dysfunction. Anxiety was associated with a decline of libido ($p < 0.0001$) and orgasmic disorder ($p < 0.002$).

Discussion

This is a non-formal comparison of two datasets investigating the impact of a voluntary TOP on contraceptive practice and sexual well-being of women.

Although the mean age of patients in the two studies is identical, their demographic profile is very different. Geneva is a more international, university city, with a more significant secondary sector than that of Lugano, probably explaining some of the differences (more students, workers, and women of foreign origin requesting TOP in Geneva). Another aspect is probably explained by the greater cultural homogeneity of the population of Lugano (mainly Catholic), with more conservative cultural traditions, and stronger social pressure (more married women, having more children, more reticent concerning contraception, having fewer repeated TOP). It has already been mentioned that the law of 1942 has been interpreted in a more liberal manner in Geneva since the 1960s, whilst in the Tessin it was applied more restrictively until 1985 [4].

Nevertheless, these two populations present many common points overall. More than half were using a contraceptive method at the moment they conceived. Notably, in both Lugano and Geneva, half the requests for TOP followed failed contraception.

Forgetting to take the pill and ignorance of what one should do when this happens, or a poor usage of the condom explain some of the failures [15, 16]. To this should be added all those women who had used oral contraception and had been victims of vomiting and diarrhoea, and those who had been prescribed an antibiotic which cancelled out the contraceptive effect of the pill without the prescribing doctor having mentioned this to the patient.

However contraceptive failure, or absence of contraception (44% in Lugano, 31% in Geneva), is not explained only by a lack of information on effective methods of contraception [17–21]. As observed in the Geneva group, almost all women (98%) were already informed about these methods and had used them previously. According to Kellerhals and Pasini, failure of contraception leading to an unwanted pregnancy demonstrates the difficulty of women or of couples to master their desire for a child [22]. This reflects the ambivalence which accompanies pregnancies [22, 23].

The event of conceiving corresponds, in some cases, to the need to prove that one can become a mother, to prove one's fertility to oneself [24]. An unconscious desire to become pregnant could also be explained by the desire to retain an indelible memory of the partner [25]. Or yet again by compensation for a loss, as shown by Lanoy and colleagues in a study carried out in Switzerland in 1975 in a group of 350 women requesting TOP [26]. This study showed that all those requesting TOP had experienced important psychological trauma, be it bereavement, breakdown in a significant relationship, or "loss of object", whether this be a surgical operation, a miscarriage, or an extra-uterine pregnancy, within the 24 months preceding their request. In each of these cases, pregnancy represented a compensation for this loss or bereavement; the imagined child becomes the absolute substitute for the lost object.

After TOP, contraceptive practices in both populations evolved in the same manner. Women using a counselled contraceptive method were more numerous (+8% in Lugano, +27% in Geneva) and those who practising unprotected intercourse were rarer (–26% in Lugano, –15% in Geneva). Among the advised contraceptive methods, use of oral contraception doubled (Lugano) or tripled (Geneva) whilst the use of the condom decreased by half. This can be easily understood; the pill is under female control whilst the condom is more under masculine control. However, these results seem to indicate that women after a TOP are more preoccupied about protecting themselves from an unwanted pregnancy than against AIDS and other sexually-transmitted diseases (STD) [27, 28]. Finally, the only point on which the two populations differ clearly should be mentioned: use of less effective contraceptive practices which increased in Lugano whilst tending to disappear in Geneva.

Concerning the evolution of women's sexual life after TOP, around two-thirds did not report any sexual dysfunction, whether it be sexual desire, orgasmic capacity, or dyspareunia [29–31]. Amongst those who did report sexual dysfunction, fewer women in Lugano than in Geneva noticed a decrease in their sexual desire.

These sexual dysfunctions seem to be explained essentially by the appearance of symptoms of anxiety following TOP. In a few cases, improvement in reported anxiety after TOP appears to be associated with the diminution or disappearance of some sexual dysfunction reported before TOP.

From a psychological point of view, the two studies confirm data already published: the majority of patients coped well with TOP and felt relieved after the procedure [32–35]. In conclusion, the majority of women cope with TOP; only a minority experience sexual dysfunctions persisting some months after TOP. Thus, it seems important that doctors and gynaecologists are aware of these symptoms, and if necessary, refer these women to specialists.

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Correspondence:
Dr Francesco Bianchi-Demicheli
Clinic of Infertility and Gynaecological Endocrinology
Department of Obstetrics and Gynaecology
Geneva University Hospitals
32, Boulevard de la Cluse
CH-1211 Geneva 14
e-mail: francesco.bianchi-demicheli@hcuge.ch

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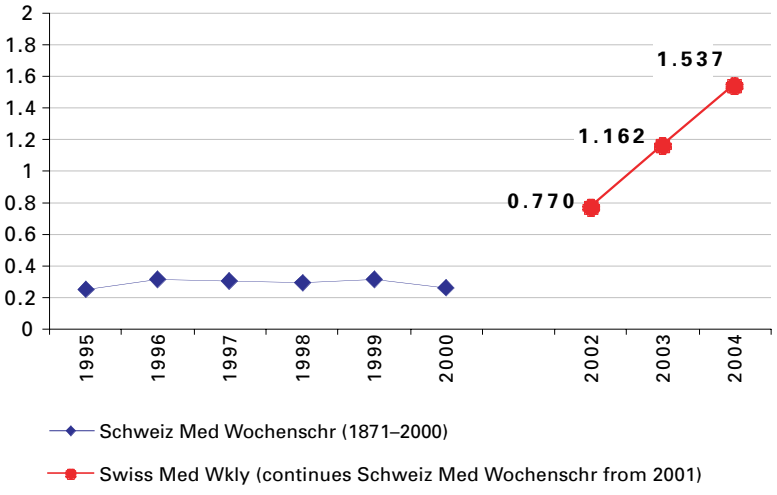

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