ORIGINAL ARTICLE

PSYCHOPATHOLOGY EXPERIENCED IN PREGNANCY LOSS: DOES POST ABORTION SYNDROME EXIST?

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Objective*: Pregnancy loss is associated with numerous psychological sequelae. The aim of this study is to examine patients with recent pregnancy loss for possible psychiatric diagnoses and the associated psychopathology. Features of post abortion syndrome were also examined for. *Methods:* Forty seven patients referred to a perinatal psychiatric service following recent termination of pregnancy or miscarriage consented for this prospective case notes review. Data on demographic characteristics, clinical history and management was collected, as well as detailed case histories of women diagnosed with post-abortion syndrome. *Results:* About two-thirds were between ages 31 to 40 years. Majority (87.2%) was married and childless. Seventy percent did not have previous psychiatric history. Ten patients were suspected to have post abortion syndrome, presenting with guilt, self-blame and having to hide terminations from spouses. *Discussion:* These findings describe the characteristics of patients who are at risk of developing psychiatric conditions after pregnancy loss. Surveillance for such factors may enable earlier detection and diagnosis. *ASEAN Journal of Psychiatry, Vol. 18 (2): July – December 2017: XX XX.

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Introduction

In 2011, Singapore's total number of reported induced abortions was 11940, equivalent to an abortion ratio of 301.1 per 1000 live births [1]. Termination of pregnancy is associated with minimal physical complications. However, depending on the cultural background, personality and past difficult experiences of the woman [2] and the support available to her prior and after the procedure, one is predisposed to developing serious psychological sequelae. Established data on rates of miscarriage in Singapore is lacking, but it has been estimated to be occurring in 12 to 30% of all clinical pregnancies internationally [3, 4].

There exist methodological difficulties to establish causal relationship between risk factors and subsequent psychological impact in women who underwent the termination of pregnancy or miscarriage. Studies were marked by poor sampling, poor comparison group selection, inadequate control of confounding factors and misattribution of causes [5]. In a conservative society, women may also choose to omit history of pregnancy loss, due to embarrassment, shame and taboo surrounding the whole topic. Some women may even terminate their follow up with the physician after abortion [6].

Development of nervous disorders, sleep disturbance [7] and even suicide following pregnancy loss [8,9], has been documented. Several studies found that psychiatric disturbances experienced by women who underwent termination of pregnancy were mainly anxiety and depression [10,11,12]. A review study reported that 8 to 23% of women experienced high levels of general distress within a month of their pregnancy termination [13]. The long-term adverse outcomes,

however, appear ameliorated, for this same review also found that after 10 years, women who had terminations did not fare worse than women who delivered wanted or unwanted children. An earlier study also reported similar findings that clinically important levels of anxiety and depression may occur as early within the first week following miscarriage but by the 12th week, these symptoms diminished [14].

There are also reports of post-traumatic stress disorder in women who suffered pregnancy loss. A prospective study assessed 113 women with pregnancy loss and at one month after the event, prevalence of post-traumatic stress disorder was 25% [15]. In Lavin's [16] case study of 10 patients who described features of post-traumatic stress disorder following induced abortion, the diagnostic criteria of Post Abortion Syndrome was described.

Pregnancy loss is also demonstrated to have social implications. Parental relationships are reported to have higher risk of dissolution after a miscarriage or stillbirth, compared with live births [17].

All of the above studies were conducted on Caucasian populations, which is inherently different from our multi-cultural and ethnicity population. Studies more applicable to our local setting, include a Japanese study which reported that conservative attitude toward induced abortion was the most significant predictor of post abortion anxiety, even after controlling for the level of pre-abortion anxiety [18] and a Taiwan study which conducted a 2 years prospective follow up on 20 mothers who had stillbirth experiences [19]. This study uncovered 4 major themes namely "transforming the meaning of death", "doing something for the deceased", "anticipation of another pregnancy" and "rebuilding a social fabric".

There is currently no local study on the psychopathology of patients who suffered pregnancy loss. This study aimed to study the demographics and characteristics of patients who were referred to the hospital's psychiatric service after a recent pregnancy loss, the type of psychiatric disorders they were diagnosed with and to examine the occurrence of possible post abortion syndrome. A detailed examination of 10 patients who presented with features of post abortion syndrome was conducted.

Methods

The study was part of a prospective clinical audit of the hospital's perinatal psychiatric service, conducted with approval by the institution review and ethics board. Informed consent was obtained from the patients and personal identifiers were removed to preserve patient confidentiality. Between May 2006 and February 2011, 47 patients with history of pregnancy loss were referred, and case notes were reviewed between March and August 2011. Data was collected using a standardized data collection form and was analyzed using the SPSS Windows SmartViewer Version 15.0.

Results

Table 1 shows the patients' demographics and characteristics. Ninety-four percent of the patients were between 21 to 40 years of age at presentation, of which close to two-thirds were between 31 and 40 years. Two (4.3%) were less than 21 years, and one (2.1%) was 41 years or older. Majority (74.5%) of them were referred by obstetricians and medical social workers, whilst 25.5% of the referrals were self-initiated. Most of the patients were of Chinese ethnicity (76.6%) while four (8.5%) were Malays, two (4.3%) were Indians and five (10.6%) were of other ethnicities (Nepalese, Japanese, Eurasian, Caucasian and Filipina). Majority (89.4%) of the patients received at least secondary school education. Forty one (87.2%) patients were married. Most of them (51.1%) did not have any live children at the time of presentation to the psychiatric service.

Table 1. Patients' characteristics at first presentation

	Number (n=47)	Percentage (%)
Age at presentation (yrs)		
18 - 20	2	4.3
21 - 30	15	31.9
31- 40	29	61.7
>41	1	2.1
Source of referral		
Study hospital / Private O&G[a]	29	61.7
Medical social worker	2	4.3
Other hospitals/ Outpatient clinics	4	8.5
Self	12	25.5
Ethnicity		
Chinese	36	76.6
Malay	4	8.5
Indian	2	4.3
Others[b]	5	10.6
Highest Education		
Graduate/Post Graduate	16	34.1
Diploma	14	29.8
Secondary education	12	25.5
Primary education	3	6.4
ITE	1	2.1
Current student	1	2.1
Marital Status		
Married	41	87.2
Single	4	8.5
Cohabit	1	2.1
Separated	1	2.1
Antenatal status at first consult		
Antenatal check-up	20	42.6
Not pregnant	27	57.4
Number of living children		
0	24	51.1
1	17	36.2
2	4	8.5
$\geq$ 3	2	4.2
Previous pregnancy loss		
1 previous TOP/miscarriages	30	63.8
2 previous TOP/miscarriages	12	25.5
3 previous TOP/miscarriages	4	8.5
4 previous TOP/miscarriages	1	2.1
Types of last pregnancy loss		
Evacuation of uterus	35	74.5
Mid-term pregnancy termination (MTPT)	8	17.0
Others[c]	4	8.5
Previous psychiatric condition		
None	33	70.2
Depression	3	6.4
Antenatal depression	2	4.3
Postnatal depression	2	4.3
Others[d]	7	14.9

[a] 3 were from private O&G
[b] 1 of each ethnicity: Nepalese, Japanese, Eurasian, Caucasian, Filipina
[c] 1 of each type of termination: Salphingectomy, Septic abortion, Failed IVF, Selective reduction of IVF pregnancies
[d] 1 of each previous psychiatric condition: Anxiety disorder, Attention deficit disorder, Childhood depression, Depression with self harm, Depression with alcohol abuse, Postnatal depression with dysthymia, Psychosis

Approximately half of them with history of pregnancy loss (42.6%) were in the antenatal stage of their subsequent pregnancies during the time of assessment by the psychiatrist. Majority (63.8%) of them had only 1 pregnancy loss. Data on the mode of termination of the last pregnancy was recorded. Thirty-five (74.5%) women had undergone an uncomplicated evacuation of uterus, of which 26 were induced abortions and 9 were miscarriages. Eight (17.0%) had undergone a mid-term termination of pregnancy (MTPT) and four had complicated termination of pregnancies (salphingectomy, septic abortion, failed in-vitro fertilization, selective reduction of in-vitro fertilized conception). Two thirds (70.2%) of them did not have any prior psychiatric conditions at the time of presentation. Three (6.4%) had past history of depression, two (4.3%) had previously been diagnosed with antenatal depression, two (4.3%) had previous postnatal depression and seven patients had other previous diagnoses of anxiety disorder, attention deficit disorder, childhood depression, depression with self-harm, depression with alcohol abuse, postnatal depression with dysthymia and psychosis.

Table 2 shows the diagnoses and treatment the patients received. Three patients were found to have no psychiatric diagnosis while close to two fifths were diagnosed with some form of depression. Five (10.6%) were still in acute grief reaction from the pregnancy loss when they were referred to the psychiatric service and eight (17.0%) had diagnoses of psychosis, major depression with alcohol abuse, major depression with dysthymia, postpartum psychotic disorder, psychotic depression, antenatal anxiety disorder with depression, antenatal depression with anxiety disorder and adjustment disorder.

Most (85.1%) of them received some form of medication on presentation. Majority (74.5%) of them also received some form of supportive therapy while the rest received grief management, relaxation therapy of cognitive-behavioral therapy. For those who were seen for a subsequent pregnancy, a case management model was adopted to promote and maintain mental well-being of would-be-mothers, which has demonstrated to be beneficial in perinatal care [20]. Only five (10.6%) did not require any form of psychotherapy at presentation.

Table 2. Diagnoses and treatment

	Number (n=47)	**Percentage (%)**
Psychiatric diagnosis on presentation		
Major depressive disorder	13	27.7
Antenatal depression	11	23.4
Acute grief reaction	5	10.6
Adjustment disorder with depressive features	3	6.4
Antenatal anxiety disorder	2	4.3
Postnatal depression	2	4.3
Others*	8	17.0
No psychiatric diagnosis	3	6.4
Medication prescribed on first presentation		
Yes	40	85.1
No	7	14.9
Types of therapy given on first presentation		
Supportive	35	74.5
Grief management	4	8.5
Relaxation technique	2	4.3
CBT	1	2.1
None	5	10.6
Suspected post abortion syndrome		
Yes	10	21.3
No	37	78.7

*1 of each concurrent psychiatric diagnosis: Psychosis, Major depression with alcohol abuse, Major depression with dysthymia, Psychotic disorder – postpartum, Psychotic depression, Antenatal anxiety disorder with depression, Antenatal depression with anxiety disorder, Adjustment disorder; CBT = Cognitive Behavioural Therapy

Ten patients were suspected to have post abortion syndrome, and their clinical case summaries are detailed as follows:

A, an India-born lady, 35 year-old came to Singapore 7 years ago. As a degree-holder, she worked in informatics at the time of presentation. She had a daughter and had undergone abortion at the 8th week gestation of her second pregnancy. She was into the 10th week of gestation of her third pregnancy when she was referred to the psychiatrist for loss of appetite, feeling of weakness, low energy and thoughts of life being meaningless for duration of a month. Screening for diabetes was done as part of routine antenatal monitoring, which was normal. She also complained of memories of the abortion, which was described by A to have not been entirely her choice then. She felt her husband had influenced her to abort because of financial constraints and marital conflicts then. Surrounding the memories of the abortion were feelings of "guilt", "anger" and regrets that she "should have insisted on keeping the pregnancy". A also reported subsequent anniversary reaction at the time of abortion. She was diagnosed with moderate to severe antenatal depression with post abortion syndrome and received supportive counseling and case management care.

B was an 18 year-old single Chinese student who was referred to the psychiatrist two months after termination of pregnancy at 10-week gestation. She was a victim of rape, and the alleged perpetrator was a distant relative. B's symptoms started even before the termination, which included auditory hallucinations of derogatory content, paranoid delusions that her flat was spooked, and depressive symptoms. After the gestational termination, B felt guilty and showed anger. She talked and wrote to the aborted fetus, and had recurrent nightmares of blood and the termination. She experienced hyper-arousal symptoms and avoided the place where the rape occurred. She was diagnosed with psychotic disorder with depression and post abortion syndrome. B subsequently underwent a tumultuous period as she was required to recount the rape account during police investigations and court appearances, or when relatives probed. B was started on antipsychotic Chlorpromazine and antidepressant Dothiepin, which later was switched to Fluoxetine due to lack of response, but she defaulted treatment subsequently.

C was 36 year old and 20 weeks into her third pregnancy during the referral. She was into the first year of her marriage and had not revealed the history of 2 previous terminations of pregnancies to her husband. The two previous pregnancies were conceived with her abusive ex-boyfriend. During presentation to the psychiatrist, C complained of prominent depressive symptoms and emotional strain from having to keep her past from her husband. She was diagnosed with Adjustment Disorder with depressive features and post abortion syndrome. She received supportive counseling at her family service centre and had declined medication.

D was a 26 year-old Chinese, and she presented to the psychiatrist at six-week gestation of her second pregnancy, conceived with her boyfriend. She had a previous termination of pregnancy at 8 weeks gestation, conceived with the same boyfriend, because their relationship then was strained. D experienced low mood, loss of appetite and experienced nightmares of the fetus, flashbacks of the operating theatre and vivid images of the termination procedure. She was diagnosed with post abortion syndrome and was started on antihistamine Promethazine. D subsequently decided for termination of the second pregnancy as she ended the relationship with her boyfriend. She was also started on antidepressant Sertraline during the time of the breakup for features of depression, but she defaulted treatment soon after.

E was a 25 year-old Chinese, who had a two-year-old son. She had history of four terminations of pregnancies, which were unknown to her husband, and was at 16-week gestation of her 6th pregnancy, unplanned and unwanted, when she was referred to the psychiatrist. E was experiencing low mood ever since her 1st pregnancy, and also loss of appetite, insomnia and had thoughts that life was meaningless. She attempted suicide in the past. E complained of re-experiences of the terminations, when watching related television programs. E was diagnosed with perinatal depression with post abortion syndrome and was started on antidepressant Dothiepin.

However, it was switched to Sertraline due to side effects, and she also received supportive counseling at the family service centre. She eventually decided to keep her pregnancy and delivered a healthy son at full term.

F initiated a psychiatric referral after a recent termination of pregnancy. She was a 31 year-old Chinese and had married for three years. She had previously terminated a pregnancy conceived with her husband, but without his knowledge. After the second termination, F experienced low mood and frequent crying. She had repeated dreams of the termination and was guilt ridden. F was diagnosed with depression and post abortion syndrome. F was offered grief therapy and an antidepressant Escitalopram but she defaulted after the first psychiatric consult.

G was a 34 year-old Chinese lady with past episode of depression and a history of abusing weed. She presented at 10-week gestation in her second pregnancy. She had previously undergone the termination at 21 years old and was having recurrent nightmares of a "man in a hood" taking away her child then. G reported anxiety, insomnia and recurrent deliberate self-harm behavior. She was diagnosed with antenatal depression and post abortion syndrome. G suffered a strained relationship with her physically abusive husband. She frequently threatened suicide during her treatment even after her delivery. She was put on trials of various antidepressants, including Sertraline, Dothiepin and Venlafaxine, and also received intensive supportive counseling, psychotherapy, as well as marital therapy. After three years of marriage, G decided for divorce and soon after, defaulted treatment.

H, a 35-year-old mother of a seven-year-old son, presented at 17 weeks of pregnancy. She had previously undergone a termination of pregnancy at 12 weeks of gestation because of severe hyperemesis symptoms then. Since that termination, H was experiencing guilt and constantly blamed herself, particularly during the anniversary period. H presented with low mood, poor appetite, insomnia and suicidal thoughts. She even contemplated terminating the pregnancy because of initial hyperemesis symptoms. H was started on antidepressant Dothiepin and antihistamine Promethazine for sedation, and her symptoms resolved rapidly, and she defaulted treatment soon after.

J, a 32 year-old Malaysia-born lady went through mid-term termination of twin pregnancies at 18 weeks gestation because of confirmed Down's Syndrome. She presented ten months later with symptoms of low mood, poor concentration, tiredness and suicidal thoughts since the termination. She also felt that the nursing staff was curt in manner during the whole process. Menstrual periods also took on the representation of miscarriages for J after the terminations and she would re-experience the terminations every month. J was diagnosed with Major Depressive Disorder and post abortion syndrome. She was started on antidepressant Sertraline and received grief therapy. J responded to medication and subsequently defaulted treatment.

K was a 20 years-old Indian nursing student who had a termination at four-week gestation. She had a history of depression with a suicide attempt but had defaulted on treatment. She presented with symptoms of low mood, poor appetite and insomnia of two months' duration after the termination. At that time, she was under stress working in a hospital environment and feeling burnt out from the care of her patients. She received supportive counseling and treatment was continued with her initial psychiatrist.

The 10 patients described above depict features of post abortion syndrome in the unique background of our multi-cultural and ethnicity population.

Discussion

This is a descriptive study on 47 patients with history of pregnancy loss referred to the hospital's psychiatric service. Approximately two-thirds of the patients studied fall in the age range of 31 to 40 years. This may be due to the association of advanced maternal age with poor pregnancy outcome. It was previously reported that women who delayed their pregnancies are more likely to develop complications and adverse outcomes than their younger counterparts [21,22]. It was reported on another study that mothers older than 35 years of age increased risk of unexplained fetal

death [23] which may contribute to pregnancy loss.

Majority of our patients with history of pregnancy loss were still childless during the assessment with the psychiatrist. In most of these women, the pregnancies had been unplanned and unwanted, yet the resultant state was one of guilt and distress – as is characteristic of the nature of post-abortion syndrome. Whilst the initial defense is rationalization and relief with the removal of the unwanted fetus, in the aftermath, the repressed feelings resurface when depression ensues. Previous studies have concluded that poor social support and low social class were linked to suicide risk after abortion. It was reported that divorced women were twice more likely to commit suicide after an abortion suggesting that poor social support could be linked to a poor outcome [8]. Supportive partners and parents were also found to protect against poor psychological outcomes [24]. Although our patients were mostly (87.2%) married, a number of them were in strained relationships, mirroring the findings of Klier [25], that there was no association between the woman's marital status and development of psychiatric symptoms after pregnancy loss. Hence it is likely that good quality support was important rather than marital status per se. Some other studies have documented that intensity of the pregnancy loss may differ between gender, perception of the loss, personal ability to cope with the event [26] and in longitudinal studies, men and women with differences in the grieving process [27] may introduce even more destabilization to the marriage, which could contribute to development of future psychological effects in the woman. In fact, the Norwegian study of 80 women followed up for 2 years, reported that pressure from the male partner to have a termination of pregnancy could have a negative impact on the woman [28]. This is echoed in one of our case studies. A had expressed feelings of guilt and anger towards her husband whom she felt had influenced her into the decision of pregnancy termination.

Numerous studies reported that a history of psychiatric illness, depression and self-harm could be associated with higher prevalence psychological effects after pregnancy loss [9,11,24,25,29]. In one-third of our series of ten patients, there was a significant past psychiatric history.

The other significant factor which surfaced in our findings was that most of the patients referred were diagnosed with some form of depression, either Major Depressive Disorder (27.7%), antenatal depression (23.4%), adjustment disorder with depressive features (6.4%) and postnatal depression (4.3%). Some of our patients were also diagnosed with anxiety disorder (4.3%). These findings are similar to those reported by studies conducted in other countries such as London [10] and the United States of America [30,31]. Nonetheless, even though clinically significant symptoms of depression and anxiety could surface in the first week of miscarriage, these symptoms may steadily decline by twelve-week [14]. With such prevalence of psychological disorders in women who experience pregnancy loss, it is recommended that doctors screen for depression and anxiety in this high-risk population.

The stage of gestation when pregnancy was lost was also a factor we examined. In our series, most of the patients underwent evacuation of the uterus, within the first trimester, except eight who had undergone mid trimester pregnancy termination (MTPT). Understandably, women who underwent termination at a later gestational age should be predisposed to having negative psychological consequences, as they would have had MTPT carried out. Such a procedure is generally longer and involved medical induction of labor in the woman, followed by delivery of the fetus and finally the evacuation of uterus. It has been reported in an Australian study that late gestation termination, past psychiatric history and conflict with religious beliefs can contribute to negative outcomes after termination [24]. Women who suffered a stillbirth would also be expected to have more severe psychological consequences, as they would have felt fetal movement, heard fetal heart sounds and could have formed stronger and longer periods of attachment with the fetus [32]. It was reported that women who had stillbirths had a higher risk of dissolution of their relationship with their partners and this risk persisted up to ten years. This is in contrast to miscarriages, which the effect occurred only over a 1.5 to 3 years period [17].

The prospective study by Engelhard [15] had assessed their patients with the Post-traumatic Symptoms Scale and found that 25% of the 113 women with pregnancy loss fulfilled the criteria as early as within the first month, while at four months; only 7% met the criteria. There are common themes, which surfaced in our case series. In the clinical history of our ten cases characteristics similar to that of post-traumatic stress disorder were seen with prominent recurring features of guilt, regret, anger, shame, recurrent nightmares of the fetus and the operating theatre and anniversary reactions. These features were also described by Lavin [16] as the diagnostic criteria for post abortion syndrome.

In our ten case studies, certain themes unique to our culture were also exemplified, with guilt prominently arising from hiding the history of pregnancy loss from their spouses. The recurring theme of self-blame in our patients could also indicate risks of future psychological problems and difficulty in working through the grieving process mirror the findings in the book written by Rando [33].

Having a problem with the in-laws was also reported as one of the precipitating factors for eventual development of psychiatric condition after a pregnancy loss. These unique features could be largely influenced by the Asian cultural background and conservative beliefs of our patients. As previously studied in Japan, conservative attitude towards abortion was a predictor of post-termination anxiety [18]. Negative attitude and doubt on the decision of termination were also found to be predictors of mental distress post termination [34]. Strong social support and the ability for the woman to express her emotions were found to be protective factors against development of post-traumatic stress disorder after a pregnancy loss [15]. Several of our patients described having to keep the previous pregnancy terminations from their spouses and in-laws and this could be one of the contributory factors for development of post-abortion syndrome.

The other unique feature identified in these ten cases was that most of the patients defaulted after the initial few psychiatric visits. This could be a reflection of the stigma against psychiatric conditions in our local Asian culture, or indeed, avoidance of the perceived shameful experience of pregnancy loss.

Although all of the above factors discussed represent the negative impact of pregnancy loss on the woman, there can still be positive consequences. An earlier study reported that women might benefit from the termination of pregnancy if the positive consequences outweigh the negative [35]. Women have also been documented to feel relief two years after the termination [30]. With the focus only on women presenting in distress, and not on those who do well, the challenge of doing large-scale and long-term population studies on such a controversial experience as pregnancy loss remains a block to our full understanding of its psychological sequelae.

Conclusions

Several prominent factors surfaced in our study. Maternal age, particularly between 31 to 40 years range, appears to play a role in placing a woman with history of pregnancy loss at risk of developing some form of psychiatric condition. Being married, having at least a secondary education and absence of past psychiatric history do not protect one from subsequent psychological sequelae after the pregnancy loss. Certain features identified in our case series of post abortion syndrome include stress from having to keep past pregnancy loss from spouse and problems with in-laws, pressure from the spouse to terminate the pregnancy and self-blame for failure to keep the pregnancy. Another significant feature is the fact that most of the patients in our case series defaulted after initial contact with the psychiatrist, likely due to the stigma associated with psychiatric conditions in our Asian culture. Surveillance for symptoms of depression and anxiety should be given to a woman with pregnancy loss, as earlier detection and diagnosis could lead to less morbidity during this unfortunate and difficult period of her life.

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