ABSTRACT
The psychiatric morbidity following hysterectomy has received increasing attention. One of the sequelae of hysterectomy has been a brief, acute psychosis with excellent outcome, the etiology and pathomechanism of which is still unclear. Two Chinese patients born of Southeast Asian origin who manifested brief, acute psychosis following hysterectomy are presented. Therapy comprised drug treatment with low dose antipsychotics and benzodiazepines coupled with hypnosis and marital therapy to explore and treat the underlying pathology. Both psychotic states resolved. Follow-up at 12 months revealed stable mental condition in one subject; however, the second patient was lost to follow up. The impact of the womb's removal is explored in the context of the ethnicity of the patients and their sociocultural background.

Keywords: brief psychotic disorder, psychiatric classification, hysterectomy

INTRODUCTION
Since ancient Greek times, the womb has been revered as an essential component of women's psychological well-being, thus the term hysteria[1]. Earlier studies found that hysterectomy was more likely to be associated with higher psychiatric morbidity than other surgical procedures[2,3].

However, with more refined methodology, researchers in the last decade have cast doubt on this notion[4,5]. Though the controversy is far from settled, most studies have concluded that past psychiatric history and premorbid psychosocial adjustment are the most important predictors of psychiatric morbidity after hysterectomy[6-9] and not its symbolic connotations with loss of femininity as suggested by previous studies[2,3].

We report two cases of brief, acute psychosis following hysterectomy. In addition to diagnostic considerations, the psychodynamics and social exigency are highlighted to elucidate the role of psychosocial factors in their pathogenesis. The cross-cultural perspective is further explored to attract more attention to the distinct psychosocial repercussions of hysterectomy in non-western cultures.

CASE REPORTS
Case 1
Mrs A, a 41-year-old Burmese-born Chinese woman, had enjoyed a happy childhood and completed secondary school before coming to Hong Kong 20 years ago for a prearranged marriage. Since the birth of her now teenager daughter, she has consulted gynaecologists for secondary infertility in the past ten years but to no avail. The marital relationship was reported to be satisfactory although the husband, a merchandiser, was regarded as authoritarian and insensitive. She described herself as prone to anxiety with a small social circle. There was no past history of menstrual abnormality, abortion or psychiatric illness. She was a fervent Buddhist.

Three weeks before her psychiatric admission, she was referred for hysterectomy because of a benign uterine leiomyoma. Initially she was ambivalent and requested preservation of the Fallopian tubes as she worried that she would be stigmatized and abandoned by her husband for the 'loss of womanhood'. However, after some persuasion she accepted total hysterectomy. The operation was uneventful and her husband left for Burma for business two weeks later. Three days after her husband's departure, she was found restless and talking irrelevantly and was subsequently admitted to our psychiatric unit.

On admission, she appeared extremely tense and self-absorbed to the extent of inaccessibility. She grasped tightly at the sides of the bed, screamed incessantly and declared that she was still menstruating and fertile. She curled up in a lithotomy position, held up her hands and made a circle that appeared to resemble the uterus. Physical examination revealed no significant findings. The provisional diagnosis of reactive psychosis was made in view of the acute onset of psychosis, and the close temporal and thematic relationship with hysterectomy. For sedation lorazepam 2mg was given orally. She
calmed down within an hour and slept well that evening. The next morning, apart from being appearing slightly anxious and mildly sedated, she appeared largely composed and rational. She admitted that she regretted the operation and felt very lonely after her husband's departure. She had only patchy memories of events that had happened the day before. Over the next few days she continued to improve with supportive psychotherapy and family sessions while on no medication. She was discharged one week later and reported to be psychologically well-balanced at one year follow up.

**Case 2**

Mrs B, a 39-year-old Malaysian-born Chinese woman, married her seaman husband from Hong Kong 20 years ago and had two daughters. She had a troubled family background. Her father drowned when she was ten, and her husband was described as an uncaring male chauvinist. She herself was a nervous person with very limited social circle. She finished secondary school in Malaysia and had been a factory worker before starting her own grocery business. She had no religious beliefs. She was admitted twice to our university teaching hospital before, first time to the medical unit for multiple somatic symptoms two years ago and second time to the gynaecological unit for dysmenorrhoea one month prior to the current episode. Endometriosis was found and she was scheduled for hysterectomy. The suspicion of generalized anxiety disorder was raised by the liaison psychiatrist on both previous admissions, but prescription of psychotropic drugs or psychiatric follow-up were not regarded necessary.

On Day 2 following surgery, she developed low grade fever that responded quickly to antibiotics. On Day 3, she was found anaemic (Hb 9.2 G/dL) and one unit of blood was transfused. Otherwise she remained well until Day 6 when she became anxious and sleepless. Blood tests, including the complete blood picture, were found to be normalized by then. She expressed regret over the operation and felt that the nurses were plotting against her. On Day 7, she further deteriorated and the liaison psychiatrist was called. On examination, she appeared self-absorbed with tearful eyes and displayed stereotypical, slow swirling movements of trunk and limbs, similar to a Thai dance. Speech was fragmented. She expressed anger towards the nurses and her husband. No definite delusions or hallucination could be elicited. The provisional diagnosis of acute psychosis was made and she was transferred to the psychiatric ward. There, she remained labile in affect though she was in better contact. On exploration of her difficulties, she repeatedly slipped into semi-trance states during which she disclosed and re-enacted scenes of sexual abuse by her uncle when she was twelve. She brooded over the early death of her father and her ‘loss of trust in men’ after the incident of sexual abuse. She improved quickly with marital therapy and daily doses of 5mg trifluoperazine and 4mg lorazepam and was discharged one week later with the diagnosis of reactive psychosis. She left for Malaysia soon after discharge to “take refuge from the stress of life” and was lost to follow up.

**DISCUSSION**

**Diagnostic considerations**

In both of the cases described above, a brief psychosis developed shortly after, and apparently in reaction to, the overwhelming stress of hysterectomy. Both psychoses resolved quickly and completely with treatment, meeting the criteria of Brief Psychotic Disorder as conceptualized in DSM-IV (10). According to DSM-IV criteria, Brief Psychotic Disorder may last “at least 1 day but less than 1 month, with eventual full return to premorbid level of functioning”. Brief reactive psychosis is a subtype of Brief Psychotic Disorder distinguished from other forms of ‘functional’ psychoses by having its diagnosis based on an assumed etiology that ‘if symptoms occur shortly after and apparently in response to events that, singly or together, would be markedly stressful to almost anyone in similar circumstances in the person’s culture’ (1).

The clinical presentation also corresponded to the classical European (mainly Scandinavian) concept of reactive (psychogenic) psychosis (11). Wimmer defined reactive psychoses as ‘caused by mental agents’ (‘mental traumata’), and in such a way, that these agents determine the point in time of the start of the psychoses, the fluctuations (remissions, intermissions, exacerbations) of the disease, very often also its cessation (12). Recent comparative research (13) suggests that the Scandinavian concept of reactive (psychogenic) psychosis provided the basis of the DSM-IV and ICD-10 categories of brief acute psychoses in a somewhat simplified form.

In our cases the psychotic episodes were emotionally highly-charged and were also coloured by dissociative features, thus also concurring with the concept of hysterical psychosis enunciated by Hollender and Hirsch (14). Lately it has been suggested that ‘hysterical psychosis’ is a superfluous category being essentially a reactive psychosis where the patient has histrionic (hysterical) personality traits (15). Although our patients displayed dissociative features in the course of their psychosis, there were no other manifestations of hysteria in their psychiatric history nor were histrionic traits in their premorbid personality.
Socio-cultural issues

Hysterectomy was the immediate stressor in both of our cases. Though a major operation removing an important organ, hysterectomy would be, at most, only a necessary but itself not sufficient factor for the development of psychosis, as post-hysterectomy psychosis is uncommon\(^\text{16,17}\). Other common denominators characterizing our patients include their origin of birth, ethnicity, settling in a foreign country for marriage, non-confiding husbands, no boys among their offspring and anxiety-prone personality. The role of infertility and sexual abuse in childhood was also conspicuous. These made the impact of the loss of uterus understandably disastrous or ‘markedly stressful’ and, as Jaspers said, ‘meaningfully connected with the ‘life history’\(^\text{18, p.385}\) and the socio-cultural traditions of the patient. The specific meaning of the precipitating event for our patients involved the loss of ability to procreate and that of womanhood, both representing the entirety of self-identity for a woman in the traditionally patriarchal Asian societies.

Reactive psychosis following hysterectomy should be viewed in the context of the rapidly changing role women have played in the past hundred years, especially in the western countries. Women’s status is no more built only on femininity and their power to procreate. They have more roles than just mothers and housewives. The common view on female sexuality has changed dramatically. Modern femininity is often symbolized by celebrity models’ slim figure, sexy dress and make-up. Procreation is no more regarded as an innate duty of women and surrogate motherhood further challenges the personal nature of child bearing. Indeed, hysterectomy\(^\text{19}\) was the most commonly performed surgery in the United States until 1981. Various studies have suggested that hysterectomy actually improves, rather than impairs, women’s well-being in general\(^\text{70}\).

However, the above outlined phenomena are culturally biased since these changes represent mainly the state of matters in certain parts of the world as they are primarily based on studies in western countries. Reports from Asia including Japan, Korea, India and China\(^\text{20-28}\) have suggested a totally different picture. In China, where 80% of the population is engaged in farming and earning less than 200 dollar per annum, manual labour remains highly valued. The size of the family or the fertility of its female members still symbolizes one’s fortune as in ancient times, reminiscent of the ancient uterine worship. Furthermore, the deep-seated cultural preoccupation with continuation of blood lines and preference of sons to daughters have never faded with time or modernization. Women have remained subordinated to men and femininity is still represented by the ability to reproduce. The substantial psychiatric morbidity among peasants undergoing sterilization, as compared to factory workers in mainland China, bears good evidence to the above conceptualization\(^\text{27-28}\). Low education and small number of children in the family are over-represented in these studies. In China, the classical presentation following sterilization is hysterical paralysis with underlying highly-charged emotions that starts shortly after the sterilization and responds favourably to psychosocial treatment\(^\text{27}\).

The above case reports and discussion echo the study by Lalinec Michaud and Engelmann conducted in Canadian women of different ethnic origins\(^\text{29}\). They found that education, the type of society and the emphasis on the woman’s reproductive ability in the particular culture were the important factors contributing to psychological reactions to hysterectomy. While issues concerning cultural universality versus cultural diversity are still under debate, further studies conducted in cross-cultural perspective, particularly among non-Caucasians, will be useful to shed light on the complex ethnopsychiatric phenomenon of psychiatric reactions following hysterectomy.

ACKNOWLEDGMENTS

The authors would like to extend their gratitude to Dr K O Ng for his advice on the manuscript.

REFERENCES