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Pain symptoms in Malay patients with major depression

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ABSTRACT

Objectives: There is a strong association between depression and pain, which is influenced by various biological and psychological mechanisms. The objectives of this study were to assess the prevalence and severity of pain symptoms among patients with major depression; and to determine the correlation between pain with clinical variables, neurotic pathology and severity of depression.
Methods: Fifty-one Malay patients with major depressive disorder without psychotic feature enrolled for the study. They were assessed with the Hamilton Rating Scale for Depression (HAM-D), Brief Pain Inventory (BPI) and Crown Crisp Experiential Index (CCEI).
Results: The majority (80.4%) of the subjects had experienced pain, but overall severity of the pain was mild (33.3%). There were no statistically significant differences in socio-demographic variables with the status of pain. The prevalence of pain was significantly higher in patients who were still depressed ($p < 0.05$), had anxious depression ($p < 0.05$) and those with prominent somatic symptoms of anxiety (SOM) ($p < 0.05$). The severity of pain was significantly correlated with neuroticism, the severity of depression (HAM-D total score) and high scores on SOM, DEP and FFA subscales of the CCEI. Among the three, the DEP subscale had the highest correlation with severity of pain.
Conclusions: The somatising patients were heterogeneous group. The pain symptoms were common in severe mixed anxiety–depression, predisposed by the underlying neurotic pathology. Neuroticism and high scores on SOM, DEP and FFA subscales of the CCEI contributed significantly to the pathogenesis of depressed Malay patients with pain symptoms.

1. Introduction

The phenomenon of somatisation of psychological disorders is well known worldwide (Gureje, 2007), especially in Asia and Africa (Saxena et al., 1988; Ohaeri and Odejide, 1994). The psychopathologic aetiology of these patients ranged from psychotic illness to various neurotic disorders, such as somatoform disorder, depressive illness, anxiety disorders, conversion disorders and personality disorders. Many of these complaints were psychologically determined. Depressed patients for instance presented with predominantly somatic symptoms such as arches and pains; rather than presenting with low mood or anhedonia. Depressed patients are found to be four times more likely to have a painful condition (Ohayon and Schatzberg, 2003). On the other hand, pain is also strongly associated with anxiety and depression (Von Korff and Simon, 1996). Chronic pain problems are common worldwide and the association of chronic pain with mood disorders extends to the non-Western world (Gureje et al., 2008). The combination of chronic pain and depression, which affects 2% of the general population, is associated with high rates of disability, socioeconomic disadvantages and greater utilisation of healthcare resources (Currie and Wang, 2004).

The experience of pain is believed to be influenced by a complex interplay of biological factors, personality traits, emotional, cognitive and socio-cultural factors (Mongini et al., 2009). Psychopathological trait such as neuroticism has the tendency to experience negative affect such as anxiety, sadness, embarrassment, anger, guilt and disgust (Quilty et al., 2008). Individuals high on neuroticism are emotional, insecure, impulsive, susceptible to psychological distress and vulnerable to stress. Some researchers believe that depression in itself may cause pain, potentially mediated through the neurochemical imbalance of neurotransmitters, including serotonin and norepinephrine. The chemical changes that occur as a consequence of depression are believed to increase sensitivity to painful stimuli and thus render individuals more vulnerable to pain (Delgado, 2004).

Patients presenting with multiple pain symptoms are quite a challenge to the clinician. Somatising patients form a high proportion of patients with multiple unexplained physical symptoms attending various medical care settings (Bridge and Goldberg, 1985; Kesler et al., 1985). The presence of pain may contribute to delayed diagnosis and treatment of depression. Identifying the characteristic features of such patients may facilitate the diagnosis of depression, avoiding unnecessary delays

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in treatment. The general objective of this study was to assess the prevalence and severity of pain symptoms among depressed Malay patients. The specific objectives were to determine the correlation between pain symptoms with socio-demographic and clinical variables, severity of depression and psychoneurotic pathology.

2. Methods

2.1. Patient selection

This was a cross-sectional study of consecutive Malay patients attending the psychiatric clinic of Hospital Universiti Sains Malaysia (USM) in the east coast of Peninsular Malaysia. The study protocol was approved by the Research and Ethical Committee (Human) of USM. Malay patients with the primary diagnosis of major depression without psychosis, aged 18 years and above, attending the psychiatric clinic during the study period were screened for the study. More than 90% of patients in the catchment areas were Malays. The selected patients were reassessed with the Structured Clinical Interview for DSM-IV Axis 1 Disorders (SCID-1) (First et al., 1997) to confirm the diagnosis of major depressive disorder without psychotic features (DSM-IV-TR) (American Psychiatric Association, 2000). Those who refused to give written informed consent; patients with co-morbid psychiatric diagnoses, e.g. psychoses, neuroses, personality disorder, mental retardation, substance abuse; and patients with medical or surgical conditions generally known to be associated with pain symptoms were excluded from the study. These include patients who had been treated or being treated for chronic pain and regular use of analgesics.

2.2. Research tools

The selected cases were assessed with Hamilton Rating Scale for Depression (HAM-D) (Hamilton, 1960), Brief Pain Inventory (BPI)-validated Malay version (Aisyaturridha et al., 2006) and Crown Crisp Experiential Index (CCEI) (Crown and Crisp, 1979). The CCEI, which was previously known as the Middlesex Hospital Questionnaire (MHQ), was designed to measure neurotic symptomatology (neuroticism) (Crown and Crisp, 1979). It consists of six scales of neurotic symptoms, each having eight items. The scales are: free-floating anxiety (FFA), phobic anxiety (PHO), obsession (OBS), somatic symptoms of anxiety (SOM), depression (DEP) and hysterical symptoms (HYS). The Malay version of the CCEI was validated by Kasmini and Kyaw (1988).

2.3. Statistical analysis

The data were analysed using the Statistical Package for the Social Sciences (SPSS), version 12.01. Bivariate analysis using the chi-square test was carried out to compare the socio-demographic characteristics and clinical variables with the presence of pain. Fisher's exact test was used if the assumptions of the chi-square test were not met. Appropriate correlation analysis was carried out to assess the relationship between neurotic symptomatology (CCEI scores) with depression score and the total pain scores. A post hoc analysis of sample size was performed in view of the small sample size. Logistic regression analysis was conducted to compute the odds ratios (OR) i.e., likelihood of having pain based on specific demographic and clinical characteristic, after adjusting for possible confounding factors.

3. Results

A total of 58 patients fulfilled the inclusion criteria. However, 7 patients declined to participate in the study due to various reasons. Final data were available for 51 subjects (88% response rate).

3.1. Pain score

3.1.1. BPI pain intensity score

The BPI intensity score ranged from 0 to 23, with a mean of 9.67 + 6.54. When the pain intensity score was averaged for the four items, the score was 2.42, which was in the range of mild pain (Mystakidou et al., 2009).

3.1.2. BPI pain interference score

The BPI pain interference score ranged from 0 to 56, with a mean of 18.51 + 15.45. When the pain interference score was averaged for the seven items, the score was 2.64, which is in the range of mild pain (Serlin et al., 1995).

3.1.3. BPI total score

The BPI total score was the sum of the pain intensity and pain interference scores. The BPI total score reflected the severity of pain. The BPI total score in the 51 patients ranged from 0 to 65, with a mean of 28.18 + 19.72. When the BPI total score was averaged for the 11 items, the score was 2.56, which is in the range of mild pain (Mystakidou et al., 2009).

3.1.4. Status of pain

The presence of pain was assessed using the single item of 'worst pain in the past 24 hours' from the pain intensity scale (Dworkin et al., 2008). Forty-one (80.4%) subjects experienced pain.

3.2. Depression score

3.2.1. HAM-D total score

The HAM-D total score ranged from 2 to 36, with a mean of 12.76 + 7.58, which was within the upper range of the mild depression category (Hamilton, 1960). Among the 51 patients, 17 (33.3%) had mild depression (score 8–13) while 15 (29.4%) were in remission (score 7 or less). Seven subjects had moderate (score 14–18) and severe depression (score 19–22) respectively, while five had very severe depression (score 23 or more).

3.2.2. HAM-D anxiety/somatisation factor score

Seven 7 items of the HAM-D anxiety/somatisation factor score are used to identify patients with anxious depression: (item no. 10, 11, 12, 13, 14, 15, 17). The anxiety/somatisation factor score ranged from 0 to 13, with a mean of 5.92 + 2.95. Using a cut-off score of 7 (Nierenberg et al., 2007), 30 (58.8%) of the subjects had a low anxiety/somatisation factor score while 21 (41.2%) had a high anxiety/somatisation factor score.

3.3. Psychoneurotic pathology

3.3.1. CCEI total score

The CCEI total score ranged from 15 to 75, with a mean of 41.5 + 13.22. Patients with a CCEI total score above 42 are classified as neurosis (neuroticism) (Hamilton, 1960). The majority or 27 (52.9%) of the subjects scored in the normal range, while 24 (47.1%) scored above 42 and were categorised as neurotic.

3.4. The relationships between socio-demographic data and clinical variables with status of pain

3.4.1. Socio-demographic variables

The mean age of the study population was 44.4 years, with a range of 18–68 years. The majority of them were female (52.9%). There were no statistically significant differences in socio-demographic variables such as marital status, employment, income and educational status with the status of pain.