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The Treatment Options for Minor Depression In Primary Care: Systematic Review.

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Abstract

Background: Minor depression is more common than major depression in primary care. However, treatment guidelines are usually provided for the major depression. This study purpose is to systematically review the available evidence for treatment of minor depression in primary care.

Method: The databases of PUBMED, CINAHL and PsychInfo were searched to January 2007. The studies focused on patients suffering from minor depression were included. Two reviewers independently reviewed and extracted data independently.

Results: Total 1038 patients with minor depression from 8 RCTs were identified and analyzed. Sample size of studies varied from 29 to 387 patients and follow up time varied from 6 weeks to 57 months. From the review, the treatment options for minor depression in primary care were grouped into three categories: pharmacologic treatment, psychotherapy and collaborative team care. The effect of pharmacologic treatment (amitryptyline and paroxetine) and psychotherapy (problem solving therapy and cognitive behavioral therapy) are still controversy when compared with usual care. For the effects of collaborative team care between psychiatrists and primary care physicians, the studies showed no significant outcomes compared with usual care from primary care doctors. However, the long term effect of CBT and behavioral treatment showed the positive effect at 12 months and 57 months respectively[16,22].

Conclusion: There are relatively few evidences for treatment minor depression in the primary care. The review found three groups of treatment options. : pharmacologic treatment, psychotherapy and collaborative team care. However, the effectiveness of these options is still inconclusive. The potential effectiveness from the treatment options of minor depression should be further investigated

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Introduction

As primary care providers, we always see the patients with clinically significant symptoms of depression but do not fulfill the DSM-IV criteria for major depression and dysthymia. This depressive state has come out to be known extensively as "minor depression" or "subtheshold or subsyndromal depression"[1]. Within this board category, "minor depression" as initially described in the Diagnostic and Statistical Manual of Mental Disorders, 4th edition (DSM IV)[2]. This is the research diagnostic criteria defined by the American Psychiatric Association (APA) in 1994. Although the APA has defined the research diagnostic criteria for minor depression, many investigators have used their own definitions of minor depressive disorder. This resulted in considerable variations in the estimation of the prevalence of minor depression. However, the minor depression is still the most common type of depressive disorder in primary care[3]. The estimation of prevalence ranged from 2% to 15%[4].

There are some evidence showed that the majority of minor depressive patients in the general population will spontaneously remit without treatment. Systematic review by Hermens in 2004[4] showed that the majority of people with minor depression have favorable prognosis: 46-71.4% achieved remission. However, another 13-27% of case will progress to a major depression or a recurrent course of minor depression or suicide[4]. Additionally, the clinical significant of minor depression has been demonstrated in many studies. Wagner, for example, found that the symptoms also impaired the patients' perception of their health and functional status including the physical and job function[5]. Furthermore, these patients had high rate of service uses and medical care costs[6].

So the depression-specific treatment should be beneficial. The management for minor depression in primary care should be further discussed. From my point of view, there are three major reasons to contribute this choice. Firstly, this condition is common in primary care. Primary care providers should be aware of the effective management for this condition; as population, by preferences, often seeks mental health care from primary care. Secondly, the treatment for this condition should be considered in effort to avoid the excess mortality, morbidity, and cost associated with this condition. Thirdly, primary care providers still have variable treatments for this condition while the standard treatment for this condition is not established[7].

Research question

The aim of research question is to address the managements for minor depression and find out what is the most effectiveness for management this condition in primary care. The three parts of quantitative question are addressed as following.

Patients: We interested in all groups of minor depressive patients in primary care settings, taking into account different definitions: the minor depression proposed in DSM IV and the subtheshold depressive disorders defined by other standard diagnosis criteria such as RDC8 were included.

Interventions and comparisons: Because of the aforementioned high prevalence and burden of minor depression in primary care, the question should be opened wider for the potential interventions that held in primary care, divided to two groups: pharmacologic and non pharmacologic management.

Outcomes: The outcome should be considered comprehensively, in terms of both clinical and economic outcomes.

Material and method

Study design: The systematic review is the appropriate study design to address this question. A systematic review of clinical trials summarizes the available evidence that we have and a meta-analysis gives us the conclusion of evidence demonstrating the effect of interventions.

A systematic review of randomized controlled trial (RCT) is the most appropriate design. For the study that evaluated effectiveness of intervention question, the patients should be randomized to group allocation to prevent bias that may result from difference from other prognostic factors and they should be allocated blindly. Additionally, the patients, doctors, and assessors should blind to group allocation. However, blinding to the treatment allocation is not possible in some studies. For example, in the trial of psychotherapy compared with antidepressant, both patient and clinician knew which treatment group they were in. Additionally, the validated method should be used to define outcome and intention to treat should be used in analysis. The follow up should also have the sufficient follow up in term of time and number of follow up participants

Identification of appropriate databases to search

Data source: The electronic medical and psychological database MEDLINE, CINAHL, PsychInfo, Cochrane controlled trial register, Cochrane database of systematic review were search through February 2009. The reference lists from the major articles were identified for additional relevant studies.

Search strategy: The search terms combines the search term related to depression *("Depressive Disorder"[MeSH],"Depression"[MeSH]),* with terms related to minor depression *(subsyndromal OR subthreshold OR minor),* with terms related to management or treatment *("Therapeutics"[MeSH],"therapy"[Subheading], "Organization and Administration"[MeSH]),* with terms related to evaluation of treatment outcome *("Treatment Outcome"[MeSH], "Program Evaluation" [MeSH], "Cost-Benefit Analysis"[MeSH])* and term related to primary care setting *(primary care OR family medicine),* using Boolean operators and database specific syntax.

Results

After reviewed the abstract and topic address of each article, the non relevant articles were excluded, such as studies that did not report minor depression outcome9 and are not clinical trial to prove the effectiveness of interventions for minor depression in primary care[10-12]. Others were excluded because they were descriptive studies[13,14].

The systematic review and longitudinal cohort studies addressing the management minor depression were not found. Only 8 RCTs that proved the effectiveness of management minor depression in primary care were identified. The characteristics and results of individual study were shown in table 1.[15-22]

Discussion

Methodological validity of result

The included RCTs showed some methodological flaws. The analysis of methodological validity of each RCT was shown in table 2. Majority of included studies are analyzed minor depressive patients as subgroup of total population in the study[15,17,20-22] and the baseline characteristics of minor depressive patients were not addressed. Subgroup analysis may affect the statistical power of studies because the subgroups may fail to show the statistically significant treatment effect. For the analysis part, the sample sizes are so small after we included only patient with minor depression. The intention to treat analysis was not also addressed in some studies[15,17,19,22] and the number of follow up in group of minor depressive patients can't be estimated.

Conclusion of result

The management options for minor depression in primary care were grouped into three categories: pharmacologic treatment, psychotherapy and collaborative team care. From the available results, the effect in short term of the pharmacologic treatment (amitryptyline[15], paroxetine[20,21]) and the psychotherapy

Table 1 The characteristics of 9 RCTs that were retrieved from search

Author (year)	Intervention	Study population, setting	Diagnostic reference	N for analysis	Follow up time	Outcome	Results
Hollyman et al.(1988)[15]	6weeks of Amitriptyline vs. placebo	Adults, general practices, London	RDC	41	6 weeks	• Symptom of depression	No significant improvement in depressive symptoms
Miranda et al. (1994)[16]	8 weeks of 8 times of 2-hour-session of CBT vs. usual care	Adults, primary care practice, USA.	RDC	49	1 year	• Symptom of depression	No significant effect on depressive symptoms after completion CBT, but moderately positive effect when compared with placebo group at 6 and 12 months follow-up
Katon et al.(1995)[17]	6 weeks of antidepressant + education from primary care physicians and psychiatrists vs. usual care	Adults, HMO primary care clinics, USA.	DSMIII	126	7 months	• Adherence and satisfaction to drug regimen • Symptom of depression • Cost of using health service	No significant differences between the intervention and control group in the all outcomes
Katon et al.(1996)[18]	24 weeks of antidepressant + education (behavioral treatment and counseling for medication adherence from primary care physicians) vs. usual care	Adults, HMO primary care clinics, USA	DSMIII	88	4 months	• Adherence and satisfaction to drug regimen • Symptom of depression • Cost of using health service	In intervention group, adherences to anti-depressant improved significantly and have a significant decrease in depression severity only 1 of 4 study outcomes analyses but were not cost effectiveness than usual care.
Lynch et al.(1997)[19]	6 times of 20minutes PST by telephone (6weeks) vs no intervention	Adults, Family Medicine Clinic, USA	DSMIII-R	29	7 weeks	• Symptom of depression	Trend toward improvement in depressive score but statistically insignificant at the conclusion
William et al.(2000)[20]	11 weeks of Paroxetine (10-40 mg.) or PST vs. usual care	Elderly, Multicenters primary care clinics in USA	DSMIII-R	204	11 weeks	• Symptom of depression • Functional health status (physical and mental) • Discontinued rate	Both paroxetine and PST improve mental health functioning in minor depressive patient with severe degree at baseline.
Barret et al.(2001)[21]	11 weeks of Paroxetine (10-40 mg) or PST vs. usual care	Adults, Multicenters primary care clinics in USA	DSMIII-R	114	11 weeks	• Symptom of depression • Functional health status(physical and mental)	The 3 intervention were equally effective
Wells et al.(2005)[22]	57 months of antidepressant + education (behavioral treatment or counseling for medication) vs. usual care	Adult, Multi center Primary care clinics, USA	Composite International diagnostic Interview of WHO	387	57 months	• Symptom of depression • Health care utilization • Unmet need	Patients in intervention group were less likely to have probable depressive disorder, unmet need and mental health visits

CBT: Cognitive Behavioral Therapy; PST: Problem Solving Therapy; QOL: Quality of Life

Table 2 The analysis of methodological validity of each RCT

Author, year	Baseline characteristic of population with minor depression	Allocation concealment	Blind	Intention to treat analysis	Total Follow up Rate
Hollyman et al.(1988)[15]	*	-	Double-blind	-	79%
Katon et al.(1995)[17]	*	-	No blindness	-	97%
Lynch et al.(1997)[19]	Equal baseline characteristic	-	-	-	82%
William et al.(2000)[22]	*	Allocation concealment	No blindness	Intention to treat analysis	79%
Barret et al.(2001)[21]	*	Allocation concealment	No blindness	Intention to treat analysis	75%
Wells et al.(2005)[22]	*	-	-	-	73%

*baseline characteristics of minor depressive patients are not addressed because the minor depression is subgroup of total population.
- Not addressed

(problem solving therapy[19-21], cognitive behavioral therapy[16], behavioral treatment[18]) are still controversy when compared with usual care. For the effects of collaborative team care from psychiatrists and primary care physicians[17], the studies showed no significant outcomes compared with usual care from primary care physicians. However, the long term effect of CBT and behavioral treatment showed the positive effect at 12 months and 57 months respectively[16,22].

Limitations

Although a systematic review of randomized controlled trial (RCT) is the most appropriate design. Randomized studies, however, might have their limitations[23,24]. These include feasibility and relevance to the real situation. The effect of an intervention in a research setting may differ from its effect in a daily practice. Furthermore, taking part in a RCT often involves procedures and commitments that are different from the routine practice. In this sense, it can be hard to attribute events in the daily practice to the effectiveness of an intervention. To accept the RCTs as the best way of evaluating effectiveness is not to dismiss other study designs that have same objective.

Implication and suggestions

There are relatively few RCTs for treatment minor depression in the primary care. The review found three groups of treatment options: the antidepressant, the psychotherapy and the collaborative team care. The implementation of findings should be used cautiously. The information of adverse effects of treatment and cost effectiveness were not addressed. Additionally, the generalisability may be limited by variations of inclusion criteria for defining this condition and validity of methodology.

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