Medical Studies Department for Children

Health Education Program to Alleviate Anxiety and Depression Symptoms in Asthmatic Children

Thesis

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(Care of Children with Special Needs)

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Germeen wissa wassif

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List of Abbreviations

AD	Atypical Depression
ADHD	Attention-deficit/hyperactivity disorder
BA	Bronchial asthma
BD	bipolar disorder
BD-NOS	Bipolar Disorder Not Otherwise Specified
CAS	Child Anxiety Scale
CBT	Cognitive behavior therapy
CCEI	Crown-Crisp Experimental Inventory
CD	Conduct disorders
CDC	Centers for Disease Control and Prevention
CFS	Chronic fatigue syndrome
CRH	corticotrophin releasing hormone
DALY's	disability-adjusted life years
DD-NOS	Depressive Disorder Not Otherwise Specified
DMDD	Disruptive Mood Dysregulation Disorder
DSM-V	Diagnostic and Statistical Manual of Mental Disorders
FEV1	Forced expiratory volume in 1 second
FVC	Forced vital capacity
GABA	gama -aminobutyric acid
GAD	Generalized Anxiety Disorder
GINA	Global Initiative for Asthma
HPA	hypothalamic-pituitary-adrenal
I.Q.	Intelligence Quotient
ICS	Inhaled corticosteroids

IgE	Immunoglobulin E
IPT	Interpersonal psychotherapy
LABA	Long acting β2 agonists
LTRA	Leukotriene receptor antagonists
MDD	major depressive disorder
MHQ	Middlesex Hospital Questionnaire
MRI	Magnetic resonance image
NAEPP	The National Asthma Education and Prevention Program
NCC	Neurocysticercosis
NE	Norepinephrine
OCS	Oral corticosteroids
ODD	oppositional defiant disorder
PBA	Pseudobulbar affect
PEF	Peak expiratory flow
PMD	Psychotic Major Depression
RBD	Recurrent brief depression
SABA	Short acting β2 agonists
SAD	Separation Anxiety Disorder
SLE	Systemic lupus erythematosus
SM	Selective Mutism
SPSS	Statistical package of social science
SSRIs	Selective serotonin reuptake inhibitors
TH1	T helper 1
TH2	T helper 2
WHO	World Health Organization

Abstract

Background: Bronchial asthma (BA) is a chronic inflammatory disorder that can influence social, physical and psychological status of the patient.

Aim: To assess the correlation between anxiety and/or depression symptoms and asthma in children and to alleviate them by health educational program.

Methods: 100 children having BA with age range (7-10 years), in which 41 children completed sessions of educational program who attended Abassia Chest Hospital in Cairo and fulfilled the inclusion criteria, in the period from 1st January to 31st December 2015. They subjected to full history taking, thorough examination and assessments of depression by Middlesex Hospital questionnaire and anxiety by Child Anxiety Scale. Educational program was implicated to children, then reassessment was done again.

Results: The mean age of children was (8.48± 1.15) years (59 male, 41 female). Results showed high frequency of both depression and anxiety symptoms with a statistical significant correlation between these symptoms and severity, control and duration of asthma as well as with type of asthma treatment.

The results of applied program denoted high statistical significant difference (P= 0.000) between asthma severity and control, depression and anxiety symptoms before and after the educational program.

Conclusion: Asthmatic children were found to have increased frequency of depression and anxiety symptoms which might be due to the nature of BA or its medications. Educational program diminished BA severity, improved its control, reduced frequency and severity of depression and anxiety symptoms. Therefore, early detection of these symptoms and appropriate education is of great importance and should be initiated to every asthmatic child.

Keywords: Asthma, Children, Depression, Anxiety, Educational Program.

Introduction

Asthma is a serious global health problem affecting all age groups. Its prevalence is increasing in many countries, especially among children. Although some countries have seen a decline in hospitalizations and deaths from asthma, asthma still imposes an unacceptable burden on health care systems, and on society and causes disruption to the families ***(GINA, 2016).***

Bronchial asthma is the most common chronic disease of childhood, it is prevalent worldwide especially in developed countries where its prevalence is increased to epidemic proportions ***(Reeves et al., 2006).***

Asthma is a chronic inflammatory disorder of the lung airways resulting in episodic airflow obstruction and characterized by bronchial hyper responsiveness and respiratory symptoms ***(Liu et al., 2016).***

A study suggested that Children with a life time history of asthma attacks had a higher rate of depressive and anxiety disorders ***(Feldman et al., 2006).*** Another study showed that children with inadequately controlled asthma had an increased risk of psychological comorbidity with anxiety, depression and poor self-esteem ***(Letitre et al., 2014).***

Many researches reported that anxiety and depressive symptoms linked to youth with asthma with higher prevalence than youth who did not have asthma ***(Meuret et al., 2006; Feldman et al., 2010).***

Asthma medications are commonly grouped into two categories: **quick-relief (rescue)** medications include short-acting β-agonists and **long-term (controller)** medications include inhaled and systemic corticosteroids ***(GINA, 2016).*** Adverse psychological effects of steroids in children include aggressiveness, euphoria, hyperactivity, anxiety and depressive symptoms ***(Stuart et al., 2005).***

Depression is a common mental disorder, characterized by sadness, loss of interest or pleasure, feelings of guilt or low self-worth, disturbed sleep or appetite, feelings of tiredness, and poor concentration. It can be long-lasting or recurrent, substantially impairing an individual's ability to function at work or school or cope with daily life. At its most severe, depression can lead to suicide ***(WHO, 2017b).***

Anxiety is an emotion characterized by feelings of tension, worried thoughts and physical symptoms such as sweating, trembling, dizziness or rapid heartbeat. Also, anxiety is associated with a feeling of apprehension and recurring intrusive thoughts ***(APA, 2017b).***

It is important for clinicians to accurately recognize anxiety and depressive disorders in children with asthma because these comorbid disorders are associated with increased asthma symptom burden ***(Richardson et al., 2006)***, additive functional impairment, increased requests for asthma medication, increased emergency room visits and increased hospitalizations ***(McCauley et al., 2007*)**.

Aim of the Study

1. To assess the correlation between anxiety and/or depression symptoms and asthma in children.

2. To alleviate the anxiety and depression symptoms in asthmatic children through changing their knowledge, attitudes and practices by the health educational program.