



Revista da ASSOCIAÇÃO MÉDICA BRASILEIRA

www.ramb.org.br



Review article

Cardiovascular risk in individuals with depression[☆]

Danielle Bivanco-Lima^{a,*}, Itamar de Souza Santos^b, Ana Maria Cortez Vannucchi^a,
Manoel Carlos Sampaio de Almeida Ribeiro^{b,c}

^a Centro de Saúde Escola Barra Funda “Dr. Alexandre Vranjac”, Irmandade da Santa Casa de Misericórdia de São Paulo, São Paulo, SP, Brazil

^b Medical School, Universidade de São Paulo, São Paulo, SP, Brazil

^c Department of Social Medicine, Faculdade de Ciências Médicas da Santa Casa de São Paulo, São Paulo, SP, Brazil

ARTICLE INFO

Article history:

Received 29 September 2012

Accepted 2 December 2012

Available online 16 May 2013

Keywords:

Cardiovascular disease

Risk factors

Depressive disorder

Depression

ABSTRACT

Depression and cardiovascular diseases (CVD) are both common illnesses. Several studies demonstrated that depressed individuals have higher mortality compared to age- and gender-matched population, with an excess of cardiovascular deaths. There is a bidirectional association between depression and CVD. Several factors can interact and influence this relationship: poverty and social inequality, reduced accessibility to health care, biological alterations (as reduced heart rate variability, endothelial dysfunction, increased inflammation and platelet function, and hyperactivity of hypothalamic-pituitary-adrenal axis), side effects of psychiatric medication, lower adherence to medical treatments, and higher frequency of cardiovascular risk factors (higher tobacco use, physical inactivity, obesity, diabetes mellitus). This article aims to update the current evidence of the possible mechanisms involved in the association between depression and CVD.

© 2013 Elsevier Editora Ltda. Este é um artigo Open Access sob a licença de [CC BY-NC-ND](#)

Risco cardiovascular em indivíduos com depressão

RESUMO

A depressão e as doenças cardiovasculares (DCV) são patologias frequentes. Estudos demonstram que indivíduos deprimidos têm maior mortalidade quando comparados a indivíduos do mesmo sexo e faixa etária, com um excesso de mortes por doenças cardiovasculares. Há uma associação bidirecional entre depressão e doenças cardiovasculares. Vários fatores podem interagir e influenciar esta relação: a pobreza e a desigualdade social, dificuldade de acesso a cuidados de saúde, alterações biológicas (menor variabilidade da frequência cardíaca, disfunção endotelial, atividade inflamatória e função plaquetária aumentadas, hiperatividade do eixo hipotálamo-hipófise-adrenal), efeitos colaterais de medicações psiquiátricas, menor adesão aos tratamentos e maior frequência de fatores de risco

Palavras chave:

Doença cardiovascular

Fatores de risco

Transtornos depressivos

Depressão

[☆] Study conducted at Centro de Saúde Escola Barra Funda “Dr. Alexandre Vranjac”, Irmandade da Santa Casa de Misericórdia de São Paulo, São Paulo, SP, Brazil.

* Corresponding author: Centro de Saúde Escola Barra Funda “Dr. Alexandre Vranjac”, Rua Dr. Abraão Ribeiro, 283, Barra Funda, São Paulo, SP, 01133-020, Brazil.

E-mail: danielle.bivanco@gmail.com (D. Bivanco-Lima).

cardiovasculares (pior estilo de vida, maior frequência de tabagismo e inatividade física e maior prevalência de obesidade e diabetes mellitus). O objetivo deste artigo é revisar as evidências sobre a associação entre depressão e doenças cardiovasculares.

© 2013 Elsevier Editora Ltda. Este é um artigo Open Access sob a licença de [CC BY-NC-ND](#)

Introduction

Depression is the leading cause of disability (measured by years lived with disability), and the fourth leading cause of disease burden worldwide.¹ It is a common disorder; the World Mental Health Survey found a lifetime prevalence of depression of 14.6% in developed countries and of 11.1% in developing countries. The same study found a lifetime prevalence of depression in the metropolitan region of São Paulo of 18.4%.²

Several studies point to a higher mortality in individuals with psychiatric disorders, including depressive subjects.³⁻⁸ This is partly explained by a high suicide rate, but these individuals also present high all-cause and cardiovascular mortality.^{5,9,10} Cardiovascular disease (CVD) is the leading cause of death worldwide, and also in Brazil.^{1,11} As described above, the impact of CVD among people with mental disorders (including depression) is higher than observed in general population.

There are several mechanisms that can influence this association: psychotropic medication side effects, poor lifestyle, reduced access to health care, increased frequency of smoking, and association with cardiovascular risk factors. The aim of this article is to review the evidence on the different factors that can influence the increased cardiovascular risk in individuals previously diagnosed with depression.

Depression, mortality, and cardiovascular events

Despite the known impact of depression on quality of life, the association between increased mortality and depression may be usually unrecognized by physicians. The first study that showed higher mortality in psychiatric patients was published in 1841, conducted by the British epidemiologist William Farr.^{12,13} According to that study, inpatients with mental illness in London had three to 14 times higher all-cause mortality compared to the general population. Recent studies support these results, considering either individuals with severe psychiatric disorders or only those with depression. Most studies observed that CVD was the main cause of death.^{3,8,14-23}

An English cohort of mental health service users with a three-year follow-up was conducted between 2007 and 2009, and included 11,697 individuals with depressive disorders. It was found a standardized mortality ratio of 1.53 (95% CI: 1.36 to 1.72) in men and 1.18 (95% CI: 1.06 to 1.31) in women.⁶ The National Health Interview Survey evaluated 57,897 white individuals in the United States aged 25 years or older in 1989, and their vital status in the National Death Index after two years. A total of 615 individuals were depressed in that survey. The relative risk for death by all causes in men was 2.4 (95% CI:

1.4 to 4.2). However, no difference was found for depressive women.⁴

A Danish register-based cohort with 5,558,959 individuals verified cause-specific mortality and its association with hospital admission for psychiatric conditions. Patients admitted with unipolar depressive disorder had higher mortality rates in all age groups. There were higher mortality rate ratios (MRR) for cardiovascular causes in both men (MRR 1.59; 95% CI: 1.53 to 1.65) and women (MRR 1.47; 95% CI: 1.43 to 1.52).²⁰ Most studies support these findings, with higher mortality and higher proportion of cardiovascular deaths in depressed individuals (Table 1).^{3,8,14-21,24}

There is also consistent evidence on the association between depression and non-fatal cardiovascular events (myocardial infarction and coronary artery disease). This association is bidirectional: individuals with depression have a higher incidence of CVD and individuals with CVD (mainly acute events) have a higher incidence of depression.²⁵⁻²⁷ Two systematic reviews have studied the impact of depression on the incidence of cardiovascular events. Hemingway et al. observed an increased incidence of CVD in individuals with depression. The relative risk (RR) in the included studies ranged from 1.23 to 5.4.²⁶ Wulsin et al. found a combined RR for cardiovascular events in patients with depression of 1.64 (95% CI: 1.41 to 1.90).²⁵

Mechanisms of association

The association between depressive disorders and the incidence of cardiovascular events is explained by several factors, detailed below. Table 2 shows the known possible mechanisms of association between depressive disorders and the incidence of CVDs.

Vulnerability and accessibility

According to the World Health Organization (WHO), people with mental health conditions, including depression, should be considered a vulnerable group, ensuring their inclusion in development programs and strategies of promotion and protection of their rights. Vulnerable individuals share common challenges in the exercise of their civil and political rights; have higher rates of stigma, discrimination, and decreased employment and educational opportunities; suffer violence and abuse; and have reduced access to health and social services.²⁸ The International Guidelines for Biomedical Research Ethics defines vulnerability as the inability to protect one's own interests, including any group or individual characteristic that could reduce the ability of self-determination.²⁹

There is substantial evidence to support that people with mental disorders have experienced more physical or sexual violence than the general population. They are more often stigmatized, resulting in barriers in finding employment, and

Download English Version:

<https://daneshyari.com/en/article/3825287>

Download Persian Version:

<https://daneshyari.com/article/3825287>

[Daneshyari.com](https://daneshyari.com)