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Editorial

Obstructive sleep apnea: Underestimated risk factor in sudden cardiac death in schizophrenia



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The only certain thing in life is that it will one day end. This absolute truth it becomes tragic if prematurely occur.

Schizophrenia is a devastating mental disorder that affects 1% of the world population and often leads a deteriorating course and premature mortality [1,2]. In people with schizophrenia, the mortality rate may be two to three times higher as that of the general population, corresponding to a 10–25 year reduction in life expectancy [2–6]. Actually, neuroscientists have been trying to identify risk factors for sudden death in individuals with schizophrenia, but the knowledge is still limited. Well-known reasons for these deaths are related to some events triggered by unnatural causes such as suicides, accidents, violence, and substance abuse [1–4,6,7]. At the same time, a substantial proportion of individuals with schizophrenia die of natural causes, prematurely and suddenly [1,2,4]. Because of this important consideration, the phenomenon of sudden cardiac death in this particular population has received a special attention of the scientific community at least the last twenty years. In patients with schizophrenia, cardiovascular diseases are on average 40–50% of all natural deaths, and schizophrenia individuals have been reported to be three times as likely to experience sudden cardiac death [1,2,4,8]. Thus, it has been established that people using antipsychotics may have important cardiovascular adverse events (e.g., QT interval prolongation), suggesting that this could lead to torsade de pointes or sudden death [2,9–13]. In the same sequence, a significant proportion of studies have suggested that schizophrenia and/or antipsychotic agents are also associated with metabolic impairment including diabetes mellitus, increased triglyceride levels and weight gain, all of them known to be related with increased cardiovascular risk [2,4,9–11,13,14]. In addition, the prevalence of smoking related mortality in people with schizophrenia is well documented and the effects of it may be due by an increase in platelet adhesiveness and release of catecholamines [2,15].

According to the studies to date, obstructive sleep apnea (OSA) is the common type of sleep-disordered breathing that is often an underappreciated co-existing illness among people with schizophrenia [16,17]. Following this line of reasoning, OSA should be on the list of risk factors for sudden cardiac death among people with schizophrenia for a number of reasons. OSA is a multifactorial sleep disorder that affects up to 30% of the population and, as elegantly published in the Sleep Heart Health study, is associated to an increased risk of cardiovascular mortality and morbidity [18,19]. In addition to these points, OSA has a threefold greater risk of all cause mortality and a higher cardiovascular mortality at 18-year follow-up [20–22] and has been independently correlated with specific cardiovascular repercussion such as hypertension [23], ischemic stroke [24,25], myocardial ischemia [26,27], arrhythmias and hence sudden cardiac death [28,29]. Considering the psychiatric disorders, it must be carefully assessed that the presence of OSA in people with schizophrenia may potentiate the possible cardiovascular dysfunctions and even increase the risk of sudden cardiac death in these individuals. As we know, after the recent, elegant and elucidative article outlined by Naqvi and colleagues, is clearly known that sleep disturbances are commonly seen in schizophrenia patients with 80% of hospitalized individuals with schizophrenia having some form of sleep disorder [30,31]. Interestingly, although there are several prevalence studies evaluated in clinic populations, there is no population-based study on the incidence of OSA in schizophrenia field [for review see [31]]. Based on these facts, it has been constantly determined in medical literature that schizophrenia and OSA are very common diseases with serious implications in terms of the impact on public health. Unfortunately, both diseases have high mortality rates and OSA people and schizophrenia patients are at increased risk of sudden cardiac death in general. On this date, further progress should be made in relation to medical management against

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sudden death in individuals with schizophrenia, once the problem persists and is increasing. In our current understanding, one of the reasons for changes in this scenario would be through the translational research, which was properly incorporated in the dictionary of medical sciences, indicates the integration of the advancements in basic science with clinical trials, taking research from the “bench-to-bedside” [32]. Despite the long road, it is time to establish a taskforce to assess the state of art/knowledge regarding the precise association between the occurrence of sudden cardiac death and OSA in people with schizophrenia, including clinical directions, research projects, and educational and social efforts.

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