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Original Research Article

CHARACTERISTICS OF INSOMNIA IN PATIENTS TREATED FOR DURING COVID19 PANDEMIC IN A TERTIARY CARE CENTRE IN URBAN INDIA: A CROSS SECTIONAL STUDY

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Abstract
Since December 2019, the entire world experiences a completely unique situation to the outbreak of SARS-CoV-2, resulting in the COVID-19 pandemic. Fear of contamination and radical changes to lifestyle are expected to impose stress on individuals, seriously affecting psychological state, including sleep hygiene[1]
Keywords: COVID-19 pandemic

Introduction:

In the sleep literature, insomnia is usually used as a term to explain the presence of polysomnographic evidence of disturbed sleep. Thus, the presence of an extended sleep latency, frequent nocturnal awakenings, or prolonged periods of wakefulness during the sleep period or maybe frequent transient arousals are taken as evidence of insomnia[1].Thus, insomnia has been thought of both as a symptom and clinical sign.

Several well-identified risk factors for insomnia were reported by the State-of-the-Science Conference in June 2005[2]. Age and gender are the foremost clearly identified demographic risk factors, with an increased prevalence in women and older adults. Importantly, the presence of comorbid medical conditions is additionally a significant contributor to the increased prevalence of insomnia within the elderly[3]

Sleep may be a crucial organic process that strongly affects immune and endocrine systems and their homeostasis. Sleep loss negatively impacts immune responses by disrupting its circadian rhythmicity and should cause immunosuppression and to disruption of the endocrine profile Somnolence and confusion are reported in ~15% of hospitalized patients with Covid-19 however, it's not known if these disturbances are directly linked to Covid-19 disease or if they're consequences of other factors, like pain or prolonged hospitalization[4]

Stress levels rise during an epidemic outbreak related to worry about health, financial consequences, changes in social life and therefore the daily routine. Reduced physical fatigue and exposure to the sun, also as increased use of electronic devices can also affect sleep homeostasis [1].

Periods of epidemics are sources of severe physical and psychological state problems, bouts of negative emotions and, relatedly, abrupt disruptions in regular sleep habits/patterns circadian rhythms. However, little or no research has provided evidence-based information on sleep-related disorders as a consequence of epidemics within the past. Ongoing COVID-19 studies also are paying less attention to the danger factors of insomnia [3]

Objectives of the study: To explore characteristics of insomnia in patients COVID19 pandemic in patients admitted in Bowring hospital during April 2021 to May 2021.

Materials and Methods:

Source of Data:

Patients with COVID 19 positive status and admitted in COVID ward of Bowring Hospital, a designated COVID treatment centre, during April 2021 to May 2021.

Methods of collection of Data:
Study design: Cross sectional Study
Study period: April 2021 – May 2021
Study setting: Bowring Hospital, Bangalore.

Inclusion Criteria:

Age: above 18 years

Sex: Both male and female
Patients with infected by the COVID-19 (Confirmed by RT-PCR) who are clinically stable

Exclusion criteria:

Minors under 18 years
Inability to consent
People not willing to give informed consent

Methodology

METHOD:

Patients infected by the COVID-19(Tested by RT-PCR), hospitalized in a COVID ward dedicated to the treatment of this co morbidity in Hospital, a specialized COVID 19 center were taken for the study. The participants were informed about the objectives and potential benefits of study and informed consent was taken after explaining the purpose of the survey in local understandable language to patients.

The Socio-demographic information, including the participants' gender, age, marital status, and socio-economic background (e.g., education level), was collected. Semi structured proforma for collection of socio-demographic profile and other clinical variables like chronicity of illness, medications was used.

The diagnosis of insomnia was made using ICD 10.Insomnia severity index (ISI) was used to find out the severity of insomnia and the characteristics of insomnia as per the instrument .

Statistical analysis:

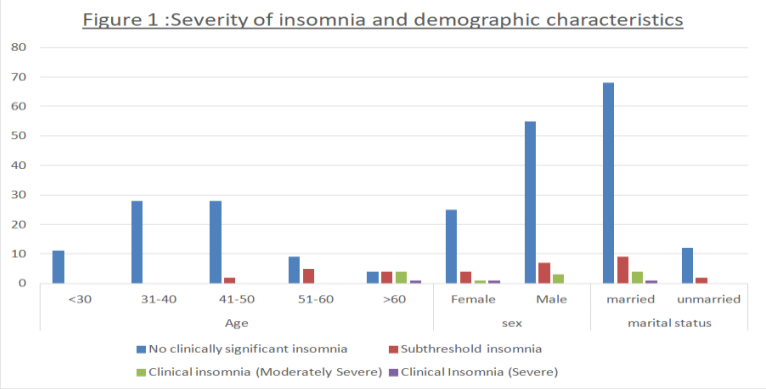
The data collected was entered in SPSS software and was analyzed statistically using descriptive statistics namely mean, median, standard deviation, percentage. Appropriate Statistical methods were applied and the data was analyzed.

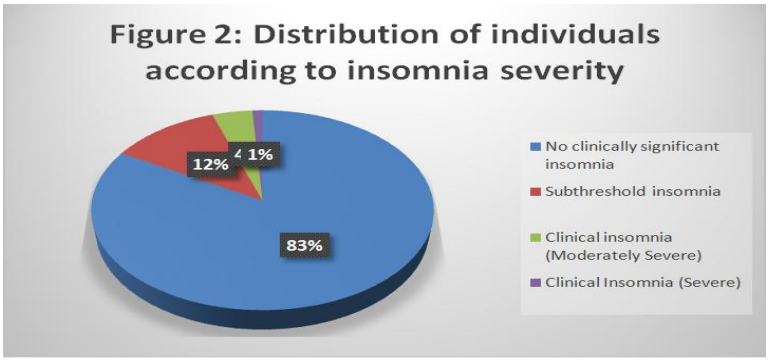
Results

We interviewed 100 patient whom we diagnosed with insomnia as per ICD 10 Criteria admitted in COVID 19 ward, but only 96 gave informed consent, and applied insomnia severity index. Participants reported more sickness symptoms on subjective sleep reported more difficulties falling asleep, reduced sleep quality, more restless sleep, and more shallow sleep and marked anxiety and depressive symptoms during the outbreak could be associated with fear of getting infected and the rapidly increasing number of cases.

From our data we found out that Insomnia was more prevalent with individuals above 60 years of age, It was more common in females than male and was more common more in married individuals than in unmarried individuals.

There is significant difference in the association of age and the insomnia severity index grade. Older individuals >41 years had sub-threshold /clinical insomnia. All who had clinical insomnia were >60 years old. This association is statistically significant with p value <0.001.





Discussion

In our study we found that 55 per cent of males had insomnia .Indian study by Kirti Gaur et al., revealed Majority of the respondents were Male constituted 64% and More than 40% of the respondents belonged to 18-29 and 30-44 age-group each insomnia were higher among females which was almost comparable to our sample with regard to insomnia in females[13] Insomnia symptoms are more common in women than in men. Women/men ratios for insomnia symptoms are about1.4.The difference between women and men increases with age, the ratio of women/men being about 1.7 after 45 years of age . In our study 96 active participants showed high score for females and age, and The studies by Sahil Bajaj et al revealed a significant regression equation indicating that sex, age scores significantly predicted insomnia and there were significantly greater contributions from females than males[16]

Our study showed 10 per cent of individuals above 60 years of age had moderate to severe insomnia on ISI which were similar to Ancoli-Israel S, et al. and Ohayon MM.[12,13] This leads to more of the night spent in lighter levels of sleep, which makes it more likely that the older adult will awaken more often during the night. . The author believes that explanation could be due to changing architecture of sleep with age . Psychosocial factors like retirement, isolation, loneliness, and bereavement may promote insomnia in older people, which needs to be explored .[11]Most epidemiological studies reported an insomnia prevalence of insomnia symptoms with age, reaching on the brink of 50% in elderly individuals especially with COVID 19[12]. Kalmbach DA et al., Insomnia among COVID-19 patients might be due to the stress associated with infection as worry provokes uncontrollable cognitive arousal which is one of the major mechanisms inducing dysregulation in sleep which was almost same when we asked reasons for sleep disturbance in our study[14]

During the Coronavirus episode, we discovered the commonness of sleep deprivation expanded essentially (ISI>7, 26.2% versus 33.7%, p<0.001), 13.6% and 12.5% of members grew new beginning sleep deprivation and deteriorated a sleeping disorder manifestations dependent on ISI, separately.

The study by Abayomi O. Olaseni et al., showed prevalence estimates analysis revealed that majority of the male respondents (65.1%) had no clinical insomnia, 20.8% of the male participants reported sub-threshold level of insomnia, 8.2% of the respondents had moderate insomnia symptoms, while 5.9% of the male respondents presented severe clinical insomnia female respondents (52%) had no clinical insomnia symptoms, 32% reported sub-threshold level of insomnia, 12.4% had moderate insomnia symptoms, while 3.6% of the female respondents presented severe clinical insomnia, our study showed also majority were males subjects around 68% had no insomnia, and more than 30% female subjects responded no insomnia, 4 (36.4) , 1 (25), and 1 (100) responded to sub threshold, moderate to severe and severe insomnia and males 7 (63.6), and 3 (75) responded to sub threshold, moderate to severe[15]

Our study showed similar results to Ancoli-Israel S, et al. and Ohayon MM, Sleep architecture changes with age. especially, the deeper levels of sleep, Stages 3 and 4, decrease, with older adults having almost no deep sleep. This leads to more of the night spent in lighter levels of sleep, which makes it more likely that the older adult will awaken more often during the night. Psychosocial factors like retirement, isolation, loneliness, and bereavement may promote insomnia in older people.[11]

Thomas Roth, revealed the Estimates of the prevalence of insomnia depend on the criteria used to define insomnia and more importantly the population studied. A general consensus has developed from population-based studies that approximately 30% of a variety of adult samples drawn from different countries report one or more of the symptoms of insomnia and our study showed 16% prevalence of insomnia : difficulty initiating sleep, difficulty maintaining sleep, waking up too early, and in some cases, no restorative or poor quality of sleep[5]

Yu Wang et al., in his study of a total of 484 (99.0%) of the 489 COVID-19 inpatients met all participation criteria and completed the assessment. . Compared to COVID-19 in patients without insomnia disorder, those with insomnia disorder were more likely to be married, female, which showed in our study that women and married peoples insomnia[17] . Authors thought that this could be a chance association.

Limitations

Our study had following limitations:

First, this cross-sectional design of the study during acute pandemic stage is limited causal inference of insufficient information at follow-up

Second, widespread psychological and insomnia problems in the general population also need to be addressed at the early phase of outbreak

Conclusion

Based on impairments caused by sleep debt, we propose that special emphasis related to sleep be included within the World Health Organization COVID-19 technical guidance to the overall public and to health care workers and other national guidelines since it is an issue which is neglected . A Prospective study with follow up at various stages of the pandemic can help us better understand the changes of association between mental health and multi-dimensional factors. Educational programmes on issues of going to sleep, interrupting sleep,

sleep length; sleep quality and sleeping problems should be developed especially during COVID 19 times .

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