

Health Consequences in Diabetic Patients Afflicted to COVID-19 Referred to Yazd Province's Hospitals

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ARTICLE INFO

LETTER TO THE EDITOR

Article history:

Received: 10 May 2020

Revised: 20 August 2020

Accepted: 30 August 2020

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COVID-19 is a public health threat, and older people who suffer from diabetes mellitus (DM) type II are more vulnerable (1). DM type II is one of the most common non-communicable diseases in the world and one of the top 10 leading causes of death in many countries (2). In 2011, it was estimated that there are 366 million people with DM in the world, and it was predicted that it would rise to 552 million by 2030 (3).

The prevalence of DM has been doubled in the last three decades, in Iran. A national study (2013) estimated that the prevalence of DM was 13.8%. According to the results of the screening program in Yazd province in 2012, the prevalence rate of

known DM cases and impaired fasting glucose was 16.3% and 11.9% respectively (4).

A study by Katibeh et. al. in 2015 determined the prevalence and risk factors of DM in an adult population (40–80 years old) in Yazd among 2090 participants. The age- and sex-standardized prevalence of DM was 24.5% (95% CI: 22.2–26.8%), including 10.5% new cases (5).

At the time of writing this report (5/5/2020), the pandemic of COVID-19 from the beginning of March to the middle of May has affected 97601 people and killed 6277 people in Iran.

Considering the vulnerability of diabetic patients to infectious diseases, this report summarizes the health consequences (the presence of other underlying diseases, the proportion of diabetic patients who were hospitalized in the intensive care unit (ICU), the length of hospitalization, and the mortality rate). It should be mentioned that this report presents the statistics of COVID-19 positive diabetic patients who were referred to hospitals in Yazd province, which is located in the central part of Iran.

In the months of March and May, 241 people suffered from DM out of 2492 definite cases of COVID-19 positive. Among non-diabetic patients, 1,207 (54%) were male and 1,044 (46%) were female vs. 135 women (56%) and 106 men (44%) with DM. 17% (n=401) of the non-diabetic group and 28% (n=68) diabetic group were in the 61-70 age range, which is the most vulnerable age range with the highest number of definite COVID-19 positive cases. From definite COVID-19 positive cases (RT-PCR positive or pathological findings in HRCT), 141 (58%) of diabetic patients and 377

(17%) of non-diabetic patients had other underlying diseases and the most common problem was cardiovascular conditions in both groups. On the other hand, 316 (14%) of non-diabetic patients and 74 (30.7%) with diabetes, were admitted to ICU. The average length of hospital stay for the non-diabetic group was 6 days while it was 8 days for patients with DM. The total number of deaths in non-diabetic patients was 246 (11%) and 54 (22%) in patients with DM.

The complications and consequences of DM are the issues which diabetic patients will experience. Severe complications including admittance to ICU, and mortality are higher in DM in comparison with non-diabetic patients. It can be concluded that severe signs and symptoms are more probable due to the COVID-19 virus in diabetic cases.

Conflict of interest

None declared

Funding source

None

Authors' contribution

All authors contributed to this project and article equally. All authors read and approved the final manuscript.

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