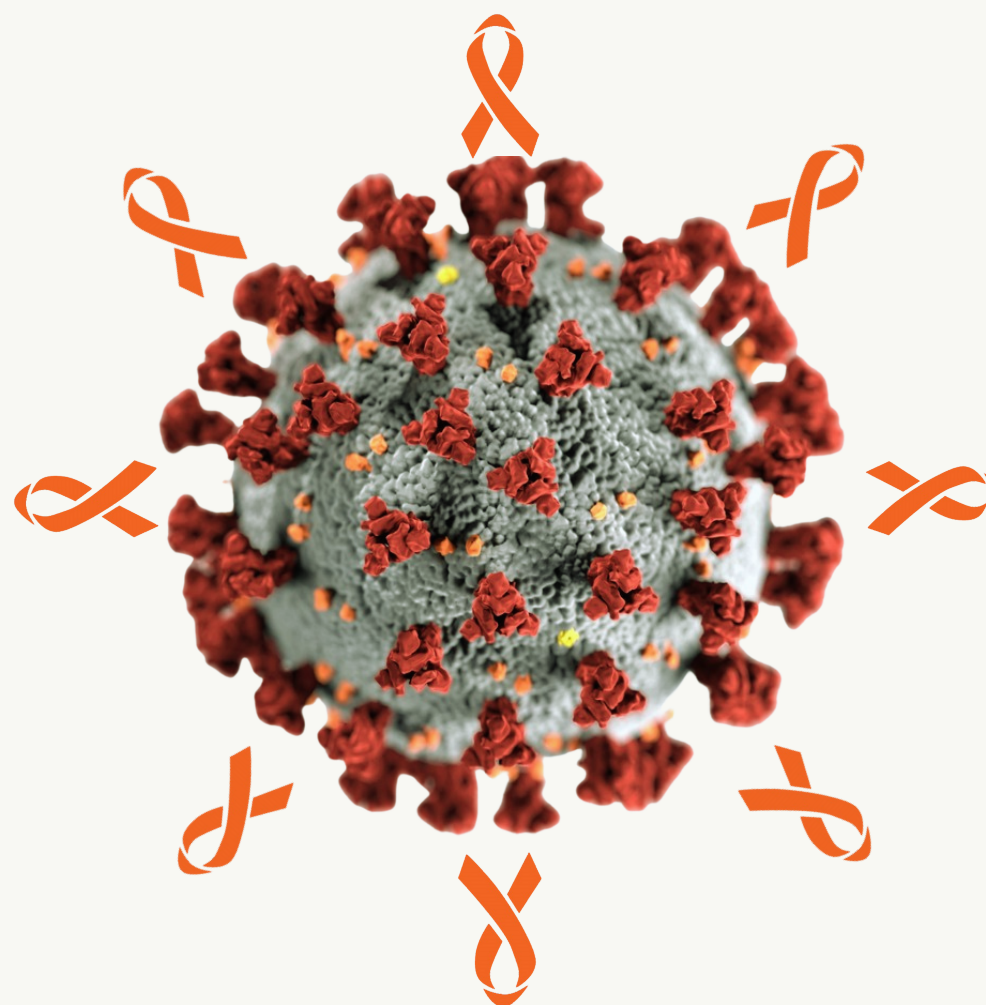


Epidemiology of COVID-19 among MS population

Population-Based Registry Study in Iran

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INTRODUCTION

Iran is one of the countries with high prevalence of multiple sclerosis (MS) and COVID-19 infection. 5,396,013 patients with COVID-19 have been identified including 116,436 deaths in Iran until September 17, 2021 (1).

OBJECTIVES

To determine epidemiology and the risk of COVID-19 infection among MS patients in Iran.

METHODS

The nationwide MS registry of Iran (NMSRI) has set up a COVID-19 infection program in 9 provinces of Iran in 2020. All MS cases with confirmed diagnosis of COVID-19 infection were registered in NMSRI. This system, registering baseline characteristics, clinical presentations and symptoms, diagnostic and treatments, hospital course and outcomes, identification of the risk factors that develop COVID-19 infection and improving quality of care among MS patients in regional and national level (2).

The neurologists register new events into the dataset including demographic characteristics, definite diagnosis of COVID-19 and its symptoms, history of comorbidities, history of hospitalization, changes in MRI and infection outcomes (2).

RESULTS

- A total number of 408 MS cases including 320 (78.4%) females and 88 (21.6%) males enrolled in the study (Figure1).
- The majority of subjects 299 (73.3%) had relapsing remitting MS (Diagram1).
- The mean (SD) of EDSS score was 1.88 (1.80) and 1.91 (1.92) before and after COVID-19 infection respectively (p value ≥ 0.05) (Figure2).
- Most common symptoms of infection included body aches 238 (60%), weakness and lethargy 239 (58%), fever 217 (55%), loss of sense of smell 200 (50%), loss of sense of taste 187 (47%) and dry cough 161 (41%) respectively (Table1).
- The most common comorbidities were hypertension and diabetes with 19 (5%) and 14 (4%) cases, respectively (Diagram2).
- Totally 77 (16.04%) cases were hospitalized and 4 (1%) were died.

CONCLUSIONS

This study will provide valuable and novel epidemiological knowledge on Iranian MS patients with COVID-19:

- COVID-19 infection was more common among female and increased EDSS among subjects.
- The infection symptoms and mortality rate of COVID-19 in MS subjects are comparable to the general population.

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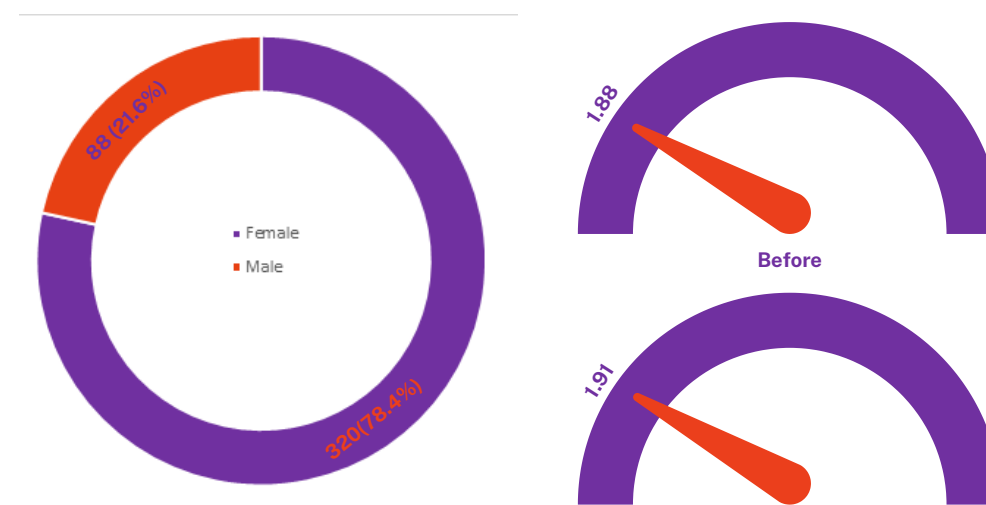


Figure1. Gender Distribution

Figure2. EDSS Scores Before & After COVID-19

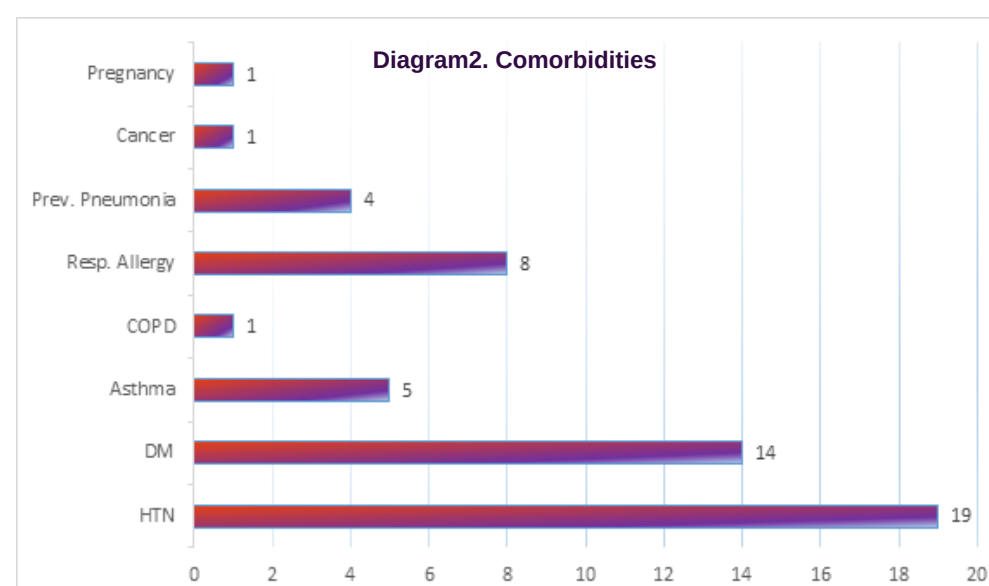
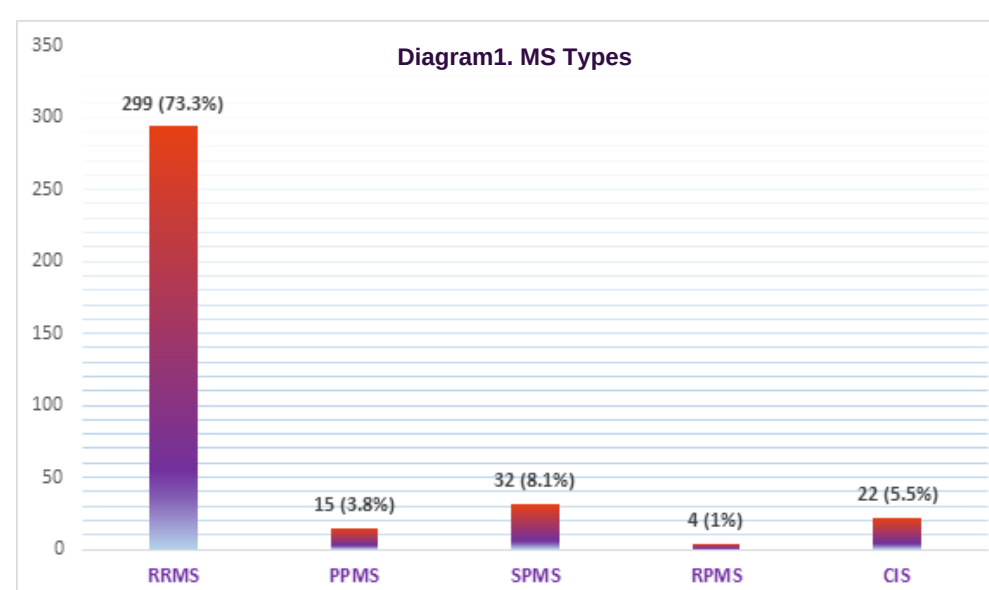


Table1. COVID-19 Symptoms in MS Population

Body pain	238 (60%)
Malaise	232 (58%)
Fever	217 (55%)
Loss of smell	200 (50%)
Loss of taste	187 (47%)
Dry cough	161 (41%)
Headache	155 (39%)
Dyspnea	123 (31%)
Nasal discharge	55 (14%)
Productive cough	49 (12%)
Altered mental status	12 (3%)

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