

Clinical characteristics and outcomes of ischemic stroke patients during Ramadan vs. non-Ramadan months: Is there a difference?

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Introduction

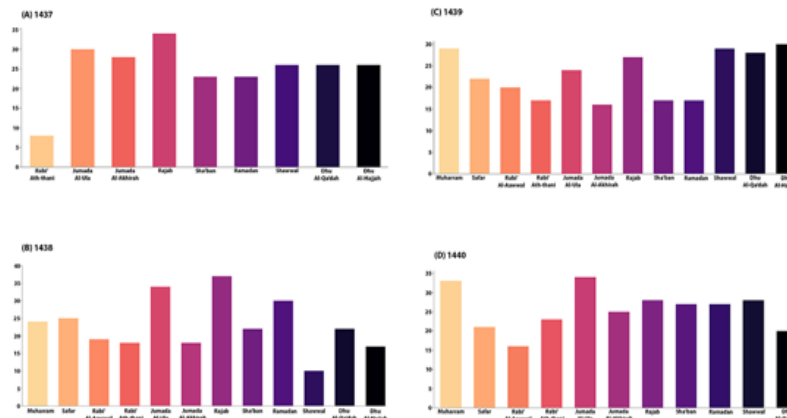
- During Ramadan, the 9th month of the Islamic calendar, most Muslims worldwide fast for about 18 h or more each day with a risk of hypoglycemia, dehydration, and changes in blood pressure.
- In Saudi Arabia, the incidence of all strokes ranged between 175.8 and 196.2 per 100,000; and was between 39.7 and 48.6 for intracerebral hemorrhage. Also, the rate for ischemic stroke was between 131.0 and 151.5
- The goal is to study the clinical characteristics and outcomes of patients experiencing an ischemic stroke during Ramadan vs. non-Ramadan months.

Methodology

- Retrospective, cohort study from February 2016 – July 2019 at Stroke Unit-King Abdulaziz Medical city, Riyadh, Kingdom of Saudi Arabia.
- The patients were divided into two groups: Non-Ramadan and during Ramadan. We define the “Non-Ramadan” group as patients diagnosed with ischemic stroke in the months before and after Ramadan during the 4 years of the study.
- We compared vascular risk factors, In-hospital death, mRS 3-5, and LOS between the two groups.
- All statistical tests were considered significant at a P-value < 0.05. Stata Statistical program (v. 15) was used for analysis.

Results

- 1058 patients were included (non-Ramadan, n = 960; during Ramadan, n = 98).
- Most non-Ramadan IS patients during Ramadan were male (68.5%; 57.1%, respectively).
- No statistical difference in vascular risk factors and medical history between the two groups.
- Ramadan patients had higher median NIHSS scores at discharge (p = 0.0045). More ICU admissions were noted among Ramadan patients (p = 0.009).



Year	Gregorian Month (s)	Islamic Hijri Year
2016	06/June–05/July	1,437
2017	27/May–24/June	1,438
2018	16/May–14/June	1,439
2019	06/May–04/June	1,440

Discussion & Conclusion

- Based on our results, there was no difference, in general, between patients with IS during Ramadan and non-Ramadan months.
- IS patients had higher NIHSS scores at discharge and more ICU admissions during Ramadan.
- Ramadan have different gender distribution of IS patients compared to the rest of the year, could be attributed to population-specific factors since other studies did not show this variation.
- Last, we suggest future studies with larger sample sizes, longer duration, and including all types of strokes.

