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Effects of Ramadan fasting on aspirin resistance in type 2 diabetic patients.

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Abstract

AIMS: Ramadan fasting (RF) may affect aspirin resistance. We conducted this study in patients with cardiovascular risk (CVR) factors to assess the effect of RF on aspirin resistance and explore whether type 2 diabetes mellitus (DM) would influence this effect.

METHODS: A total of 177 stable patients with ≥ 2 CVR factors were recruited. All patients observed RF and were taking aspirin. Physical exam and standard biological tests including glycaemia and serum lipids data were performed before Ramadan (Pre-R), at the last week of Ramadan (R) and four weeks after the end of Ramadan (Post-R). In the same visits caloric intake was calculated and platelet reactivity to aspirin was assessed using Verify Now point-of-care assay.

RESULTS: In the overall population, there was no significant change in absolute aspirin reaction unit (ARU) values and in metabolic parameters. In DM patients (n = 127), ARU change from Pre-R values was +19.7 (p = 0.01) and +14.4 (p = 0.02) respectively at R and Post-R. During Ramadan, glycaemia, triglycerides, and cholesterol levels increased significantly and returned to Pre-R values thereafter. These changes were not observed in non-DM patients.

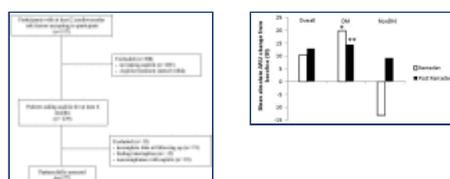
CONCLUSIONS: During RF aspirin resistance increased only in DM patients. This effect persisted one month after Ramadan. Simultaneous alteration of glycemic control and increase of serum lipids levels could potentially be a favorable factor.

STUDY REGISTRATION: The protocol was registered at clinicaltrials.gov under: [NCT02720133](#).

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