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Original research

Impact of COVID-19 lockdown on people living with diabetes: Experience from a low-middle income country in South Asia

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ABSTRACT

Aims: COVID-19 lockdown imposes many challenges to patients with diabetes. We aimed to assess the impact of COVID-19 lockdown on health-related behavior and disease control among patients with diabetes.
Materials and methods: A cross-sectional study was conducted among adults with diabetes attending a diabetes clinic in Colombo, Sri Lanka in June-July 2020. Lifestyle and disease control changes before and during the lockdown, were determined using an interviewer-administered questionnaire and review of medical records.
Results: Among 1727 participants mean HbA1c decreased by 0.30% (95% CI 0.24–0.36, p < 0.001). HbA1c improved in 37.6% but deteriorated in 18.8%. Male sex (OR 1.36, 95% CI 1.10–1.67), better education (OR 1.10, 95% CI 1.01–1.20) and being employed (OR 1.08, 95% CI 1.00–1.16) were sociodemographic predictors of improved control. Better dietary adherence (OR 1.55, 95% CI 1.13–2.12), night-time sleep (OR 1.46, 95% CI 1.13–1.88) and indoor exercise (OR 1.62, 95% CI 1.23–2.07) were behavioural determinants of improved glycaemia. Decreases in self-monitoring of blood glucose (OR 1.45, 95% CI 1.09–1.93), exercise (OR 1.7, 95% CI 1.32–2.20), medication use (OR 1.95, 95% CI 1.37–2.78), dietary adherence (OR 1.72, 95% CI 1.32–2.26) and family income (OR 1.45, 95% CI 1.12–1.88) predicted worsening glycaemia. Only 4.1% used telehealth services; 83.1% of them reported good satisfaction.
Conclusions: Mean HbA1c improved during the lockdown. Overall, 37.6% of participants improved their glycaemic control. Well-educated employed men were more likely to improve glycaemic status. Improving diabetes control through healthy lifestyle practices and self-monitoring are feasible even in resource limited settings.

1. Introduction

COVID-19 pandemic has rapidly spread around the world infecting more than 200 million and causing more than 4.3 million deaths [1]. It has caused a dramatic change in lifestyle of individuals and function of healthcare systems [2]. South Asian region bears a large proportion of the global diabetes burden and is also experiencing a rapid rise in COVID-19 incidence [1,3]. Sri Lanka has the second highest (10.7%) age-adjusted diabetes prevalence in adults in the South East-Asia region exerting a significant healthcare burden to the nation [3].

People living with diabetes are at increased risk of adverse complications and death from COVID-19 [4]. This has been observed in multiple setting including in-hospital, intensive care [5] and even perioperative patients [6]. Although the exact mechanism is not known, it is presumed that concomitant pro-inflammatory, prothrombotic state, pre-existing risk for atherothrombosis and high stress mediate the excess risk [4,5]. Therefore, emphasis has been

Abbreviations: AL, advanced level; SMBG, self-monitoring of blood glucose; SBP, systolic blood pressure; DBP, diastolic blood pressure.

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