

## An epidemic of sub acute intestinal obstruction during Covid-19 pandemic related lockdown - 'the lockdown belly'

### Editor


Lockdown measures were implemented in India from 24 March, 2020 due to the Covid-19 pandemic as it was in other places<sup>1,2</sup>. Among the states, Kerala, a small state by area with a population of 3.5 million in the southern tip tops health indices in India<sup>3</sup>. We noticed a sharp increase in the number of patients with intestinal obstruction (IO) since the Covid-19 pandemic-related lockdown began. Concerned, we compared the incidence rate (IR) of IO among patients admitted in our unit since the lockdown began to the same time period in the previous 2 years. Apart from the number of IO, we collected total biweekly admissions to our surgical ward from 1 January to 15 May for this year and for the preceding two years.

We noticed an epidemic that peaked (40 per cent) between 15 April and 29 April but started reducing (21 per cent) after that. This lower incidence rate coincides with relaxation in lockdown-related restriction since 3 May (Fig 1). On comparing to weeks preceding the lockdown as 'unexposed', the attributable risk (AR per cent) over

6 weeks is 75 per cent. That is, 12 of 16 IO cases which occurred in that period could have been prevented but for the lockdown. When the incidence rate during the same period in the years 2018 and 2019 were considered, the AR per cent increased to 77 per cent and 92 per cent, respectively.

Interestingly, all 16 patients who presented in this period with IO had four common factors. They were over 60 years, had prior abdominal surgery, had observed lockdown restrictions strictly and had eaten a high fibre diet which included jackfruit prior to their symptoms. Jackfruit (*Artocarpus heterophyllus*) is a popular seasonal fruit in Kerala, consumed both ripe and raw, was easily available while other food was limited during the lockdown. However, it has a high non soluble fibre content (1.1gm/100gm)<sup>4</sup>. Additionally, the strict observation of lockdown meant people were confined to their houses with low physical activities. We hypothesize that a combination of all the above four factors which occurred during the lockdown period could be responsible for this epidemic of 'Lockdown Belly'. We managed 15 (93.8 per cent) conservatively with one patient requiring adhesiolysis. However, at least 75 per cent of them could have been prevented altogether presumably by avoiding the modifiable factors among the four factors viz high

fibre diet and low physical activity. Although a larger study will confirm our hypothesis beyond doubt, we would like to share our observation to prevent such events in other countries that have imposed lockdown.

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Fig. 1 Incidence rate of intestinal obstruction by year

