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Double trouble: a pandemic of obesity and COVID-19

The Lancet Gastroenterology & Hepatology's editorial, Obesity: another ongoing pandemic,¹ is appropriate during the current times to focus on the issue of obesity across the world. Obesity is a major health-care concern, even in middle-income and low-income countries, because of its association with chronic diseases such as diabetes, cardiovascular diseases, and some cancers.

Research has revealed that obesity weakens the immune system, thus making the individual susceptible to infectious diseases. Obesity has emerged as a strong risk factor for severe disease during the COVID-19 pandemic; several studies have shown that individuals with COVID-19 and obesity have an increased risk of severe disease, hospitalisation, and death.² The findings of a prospective community-based cohort study highlighted that a body-mass index greater than 23 kg/m² is associated with increased risks of severe COVID-19 outcomes, particularly in patients younger than 40 years.³ This large population-based study corroborated evidence of obesity being a major risk factor associated with adverse outcomes in patients with COVID-19.²

The prevalence of overweight and obesity in India has doubled during the past two decades, leading to a notable increase in the burden of non-communicable diseases.⁴ Although India has made tremendous progress in providing primary and preventive health care to its citizens, it has not recognised obesity as a major health-care concern to be acted on. The severity with which the second wave of the COVID-19 pandemic has hit India, affecting millions of young people who haven't been immunised, suggests that obesity could be one of the most important determinants of

adverse outcomes. The current wave of the COVID-19 pandemic, which has caused the loss of thousands of young lives, should be a wake-up call for the policy makers to address the issue of the pandemic of obesity in India and across the world.

Obesity is a modifiable risk factor of COVID-19 and one goal of public health bodies should be to achieve a healthy weight at the population level that might reduce adverse outcomes for non-communicable and infectious diseases, including COVID-19.

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*Santosh Kumar K Y,
Praveen Kumar R Bhat,
Chandrashekar J Sorake
drsantoshky@gmail.com

Department of Surgical Gastroenterology and HPB Surgery (SKKY, PKRB), and Department of Medical Gastroenterology (CJS), KS Hegde Medical Academy, NITTE (Deemed to be University), Mangalore 575018, India

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Pooling samples for hepatitis C RNA detection

Despite the negative impact of the COVID-19 pandemic on elimination of hepatitis C virus (HCV), the use of mass testing for SARS-CoV-2 might represent a glimmer of opportunity to increase HCV diagnostic capacities. Processing SARS-CoV-2 diagnostic tests has created an enormous workload for laboratories worldwide and has resulted in decreased processing of many other tests, such as those for HCV infection. Diagnosis of an active HCV infection

is the necessary first step set by WHO as a key target to reach elimination. We propose a diagnostic strategy to overcome this challenge and to contribute to increasing the diagnostic capacity of clinical laboratories.

In many countries, sample pooling strategies have already been used for molecular screening of HCV RNA in blood banks and transfusion centres.¹ The strategy of pooling samples for diagnosis and only in cases of positive results doing an individual analysis was introduced by Dorfman in 1943,² and has shown its usefulness in the diagnosis of different infectious agents, including SARS-CoV-2.³

Here, we present proof of concept that a pooling strategy for HCV RNA might allow for the identification of patients with chronic HCV with excellent sensitivity performance. We tested two commercially available diagnostic tools (CAP CTM HCV v2.0 and the COBAS 6800 system, Roche Diagnostics GmbH, Mannheim, Germany) to determine their sensitivity through the ability to detect one positive HCV sample within a different number of pooled samples (ranging from 10 to 1 000 000 samples). Both tests were able to identify a positive sample when pooled in up to 10 000 samples (appendix).

Implementing a pooling strategy to increase diagnostic capacities for the elimination of HCV has some challenges, which include determining a pool size that maintains the maximum precision in the analysis and having appropriate laboratory technology for grouping and reporting results. Our results show that a plausible pool size in Spain, with an estimated prevalence of chronic HCV infection of 0.22%,⁴ would be 100 samples. This size allows for the detection of a single positive sample in a pool that is within the detection limit of commercial RNA assays, and also within the detection limit of core antigen (2000 international units per mL).⁵ Given current market prices, the price of pooled testing for HCV RNA could be €0.30 per sample for a pool

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sample size of 100. Consequently, by substantially improving cost-effectiveness, this strategy enables and provides the necessary sustainability for large scale HCV testing, including universal or age-based screening.

In summary, the strategy of pooling samples for the diagnosis of active HCV infection has numerous advantages that can be implemented and scaled up with the aim of eliminating HCV as a public health threat by 2030.

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Antonio Aguilera, Sara Pereira,
Ana Fuentes, Adolfo de Salazar,
Rocío Trastoy, Daniel Navarro,
Camila A Picchio, Jeffrey V Lazarus,
*Federico García
fegarcia@ugr.es

Servicio de Microbiología, Complejo Hospitalario Universitario de Santiago, Santiago de Compostela, Spain (AA, SP, RT, DN); Departamento de Microbiología, Universidade de Santiago de Compostela, Santiago de Compostela, Spain (AA); Instituto de Investigación Sanitaria de Santiago, Santiago de Compostela, Spain (AA); Servicio de Microbiología, Hospital Universitario Clínico San Cecilio, Granada, Spain (AF, AdS, FG); Barcelona Institute for Global Health, Hospital Clínic, University of Barcelona, Barcelona, Spain (CAP, JVL); Instituto de Investigación Biosanitaria, Granada, Spain (FG)

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Management of gastrointestinal services in Tamil Nadu, India, during COVID-19

In India, during the first wave of the COVID-19 pandemic, the state of Tamil Nadu become a COVID-19 hotspot between April and September, 2020, with peak infection rates in July, 2020.¹

Each year, the department of gastroenterology and hepatology at Kovai Medical Center and Hospital, Coimbatore, Tamil Nadu, treats 16 000 outpatients, admits 1600 inpatients, and carries out 3500–4000 endoscopies. Initial data showed that the case fatality rate due to COVID-19 in India² was about 3%. Our audit data showed that inpatient mortality from gastrointestinal conditions was more than 4%. Gastrointestinal cancers represent 20% of all cancers in India, and nearly one in five require immediate surgery.³ As a result, and because the majority of our population had travelled (from nearby districts without public transport) after lockdown on March 24, 2020, the decision was taken to restart gastrointestinal services on April 15, 2020. We began by implementing the Asian Pacific Society for Digestive Endoscopy (APSDE) COVID-19 guidance⁴ for screening (fever, travel history, occupation, cluster, close contact, evaluate for dyspnoea), with appropriate levels of personal protective equipment for the entire department (appendix p 5). An endoscopy was done only if essential and appointments for older patients and those in shielding were offered only if mandatory or an emergency. Since it was not practical to create negative pressure rooms, we took the pragmatic decision to ventilate endoscopy suites and outpatient rooms with air from the outside⁵ to reduce indoor airborne transmission of COVID-19.

We analysed outcomes at our centre from April 1 to Sept 30, 2020, and compared these with data from the

same period in 2019 (appendix pp 1–2). Patients were contacted by telephone 2 weeks after endoscopy and contact with inpatient gastrointestinal services during July, 2020, to enquire about any COVID-19 symptoms, and data on symptoms among health-care workers within the gastrointestinal services were collected weekly from April to September, 2020.

The number of endoscopies done in 2020 was 23.7% lower than in 2019 (1427 vs 1871; appendix pp 3, 6). In terms of procedure mix, there was a slight drop in the percentage of oesophagogastroduodenoscopies and sigmoidoscopies done in 2020 versus 2019, but the proportion of all other endoscopy procedures increased in 2020 compared with 2019 (appendix p 3). The proportion of endoscopies that resulted in a diagnosis of malignancy or inflammatory bowel disease increased significantly in 2020 versus 2019, and fewer endoscopies found no abnormalities (appendix p 3). Our therapeutic endoscopy volume increased significantly in 2020 compared with 2019 (appendix p 3).

Inpatient volume was 14.4% lower in 2020 than in 2019 (681 vs 796 patients) but the percentage volume of work was similar across all diagnoses except for increased upper gastrointestinal bleeds in 2020 (appendix pp 3, 6). Mortality was higher in 2020 than in 2019, but this difference was not statistically significant (appendix p 3). There was also a slight, non-significant increase in the mean duration of stay in hospital in 2020 versus 2019 (appendix p 3). Workload at our centre appeared to vary on the basis of COVID-19 positivity in the community, with patients seeking services only when needed (appendix p 6).

Of 195 patients who completed telephone follow-up following endoscopy in July, 2020, one (0.5%) reported developing COVID-19 symptoms after visiting the hospital in July, 2020, 13 days after endoscopy.



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