



# Negativna povratna sprega malnutricije i pandemije SARS-CoV2 u djece

## Bidirectional negative relationship of SARS-CoV2 pandemic and nutrition status in children

Sanja Kolaček<sup>1✉</sup>

<sup>1</sup> Klinika za dječje bolesti Zagreb, Zagreb

**SAŽETAK.** U kineskom gradu Wuhanu, u prosincu godine 2019. otkriven je novi soj koronavirusa koji je Svjetska zdravstvena organizacija (SZO) imenovala *Severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2)*. Bolest koju uzrokuje, nazvana *Coronavirus Disease-19 (COVID-19)*, proširila se svijetom tolikom brzinom da je već 11.3.2020. SZO označila početak pandemije, a ubrzo nakon toga 186 od ukupno 193 zemlje svijeta označile su početak restriktivnih mjera poznatih pod nazivom *lock-down*. Završetak pandemije označen je tek nedavno (SZO: 5. svibnja 2023.), a do tog trenutka oboljelo je 765,222,931 osoba, a umrlo je nepunih sedam milijuna (1). Podatci za djecu su nepouzdana – najčešće se spominje da je oko 5% oboljelih bilo mlađe od 20 godina, dok je umrlih bilo ispod 1%, što pokazuje da je COVID-19 bila blažega tijeka u djece. Međutim, pandemija i posljedične restriktivne mjere stvorile su okruženje koje višeznačno negativno utječe na zdravlje djece. U manje razvijenim zemljama uslijedilo je pogoršanje neimaštine, poremećaj opskrbe hranom, izostanak organizirane prehrane u predškolskim i školskim ustanovama i podjele socijalne pomoći, što je sve pridonijelo povećanju učestalosti svih oblika pothranjenosti (2). S druge strane, smanjenje tjelesne aktivnosti, stjecanje navika “nezdrave prehrane” i stresno okruženje preduvjeti su za porast preuhranjenosti i pretilosti u razvijenim zemljama (3). Obje forme malnutricije – pothranjenosti i pretilost imaju brojne potencijalne neposredne i dugoročne štetne zdravstvene učinke (4). Štoviše, i pretilost i pothranjenost negativnom povratnom spregom pogoršavaju klinički tijek infekcije te olakšavaju njezino kliničko očitovanje, zatvarajući *circulus vitiosus* uzroka i posljedica. Budući da je od početka pandemije prošlo više od 3 godine, objavljeni su relevantni znanstveni podatci i dokazi koji će biti prikazani u predavanju.

**SUMMARY.** In December 2019 in Wuhan in China, the severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) was identified as a cause of COVID-19, spreading so quickly worldwide that already on March 11<sup>th</sup>, 2020, the WHO declares a pandemic [1]. Soon after, 186 of 193 world countries adopted a lock-down policy which varied from almost complete movement restriction to a set of restrictive measures with quarantine and isolation of affected persons. On May 3<sup>rd</sup>, the WHO proclaimed the end of the pandemic, and by that time there were 765,222,932 confirmed cases of COVID-19 recorded, as well as almost seven million deaths [1]. Data on children are not as precise, and it is generally accepted that around 5% of infected cases and below 1% are subjects below 20 years of age. This clearly shows that children are relatively spared by the infection itself, and the disease is often asymptomatic and of mild course. The COVID-19 pandemic set the stage that fosters the development of undernutrition and of obesity in children, depending on the economic power of the country and the socioeconomic strata of the individual patient (2-4). Furthermore, both obesity and undernutrition through different pathogenic mechanisms increase the risk of more severe clinical presentation of COVID-19, closing therefore a vicious circle of causes and consequences. It is now more than three years since the pandemic was proclaimed – a period that might be sufficient for relevant data to be published on the effect of the pandemic in general, and of the infection itself on the nutritional status of children. The published data will be summarized and presented in the lecture.

### LITERATURA

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✉ Adresa za dopisivanje:

Sanja Kolaček, Klinika za dječje bolesti Zagreb, Zagreb