Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information website.

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Letter to the Editor

Response to COVID-19 and diabetes: Can DPP4 inhibition play a role? – GLP-1 might play one too

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Hello,

I recently came across your commentary on the function of dipeptidyl peptidase 4 (DPP-4), its possible role in coronavirus infection, and your hypothesis that DPP-4 inhibition may play a role in severe acute respiratory syndrome coronavirus 2 (SARS-COV-2) treatment [1]. As my role is in surgery, acute systemic inflammation in people with type two diabetes is always on my mind to improve perioperative glycaemia and outcomes. I wanted to add to your discussion based on my experience in this field.

Endogenous cortisol, catecholamines and Interleukin-6 (IL-6) are main drivers in the post-operative stress response, causing acute insulin resistance and resulting in hyperglycemia in people with diabetes [2]. This effect is so dramatic after cardiac surgery that up to 80% of people develop hyperglycemia regardless of diabetes status [3]. Post-operative IL-6 increase has shown to cause glucacon like peptide 1 (GLP-1) release [4], and pre-operative GLP-1 analogue administration has shown efficacy in reducing post-operative hyperglycemia brought on by cardiac and non cardiac surgery [5,6], including superiority compared to pre-operative long acting insulin [7]. Unfortunately, DPP-4 inhibitors have yet to show the same degree of success in this regard [8,9].

As many people are likely taking GLP-1 analogues while mildly ill with SARS-COV-2, it may also be worthwhile studying the effects of GLP-1 analogues in preventing or reducing the sustained hyperglycemia resulting from systemic inflammation related to SARS-COV-2 infection. Based on their effectiveness in preventing and treating hyperglycemia related to systemic inflammation after cardiac and non-cardiac surgery, GLP-1 analogues may play an important future role here as well.

Thank you for your time, and stay well soon.

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Declaration of Competing Interest

I have no conflicts of interest to declare.

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