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Letter to the Editor

## Reply to comments on Letter to the Editor – Diabetic ketoacidosis precipitated by Covid-19 in a patient with newly diagnosed diabetes mellitus

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Thank you for your interest in our Letter to the Editor as well as your comments regarding the reference range for pH in the arterial blood gas result presented in Table 1 of our letter.

Diabetic ketoacidosis (DKA) is characterized by metabolic acidosis with significant ketonemia or ketonuria in the presence of hyperglycemia. An arterial or venous pH of 7.30 and below is generally accepted as one of the diagnostic criteria

[1,2]. This patient had an arterial pH 7.28, serum bicarbonate 12 mmol/L, serum ketones 6.4 mmol/L, anion gap 30 and venous glucose 39.7 mmol/L, thereby fulfilling the diagnosis of mild to moderate DKA. We acknowledge a typographical error in the reference range for pH but this should not detract us from the diagnosis of diabetic ketoacidosis in this patient.

In addition, we also thank the authors for pointing out that pH is a logarithmic scale and should not have a unit attached.

Please find the corrected version of our table. We apologize for the errors and the inconvenience caused.

**Table 1 – Laboratory results.**

| Investigation            | Result | Reference Range |
|--------------------------|--------|-----------------|
| Venous glucose (mmol/L)  | 39.7   | –               |
| Arterial blood gas       |        |                 |
| pH                       | 7.28   | 7.35–7.45       |
| Bicarbonate (mmol/L)     | 12     | 22–28           |
| pCO <sub>2</sub> (mmHg)  | 25     | 35–45           |
| Sodium (mmol/L)          | 128    | 135–145         |
| Chloride (mmol/L)        | 86     | 95–110          |
| Anion gap                | 30     | 8–16            |
| Ketones (mmol/L)         | 6.4    | <0.6            |
| Creatinine (umol/L)      | 95     | 67–112          |
| Glycated haemoglobin (%) | 14.2   | –               |

## REFERENCES

- [1] Kitabchi AE, Umpierrez GE, Miles JM, Fisher JN. Hyperglycemic crises in adult patients with diabetes. *Diab Care* 2009;32:1335–43. <https://doi.org/10.2337/dc09-9032>.
- [2] Savage MW, Dhatariya KK, Kilvert A, et al. Joint British Diabetes Societies guideline for the management of diabetic ketoacidosis. *Diabet Med* 2011;28:508–15. <https://doi.org/10.1111/j.1464-5491.2011.03246.x>.

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