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Response

We thank Mr Jolobe for his comments. It raises an interesting question relating to the fluid management of patients in DKA who are at an increased risk of overload (those with heart failure, renal failure or liver failure). The Joint British Diabetes Society guideline¹ does not suggest any alternative fluid management strategies for patients with end organ damage. To our knowledge, there has not been any work done to assess the management of DKA specifically in these patient cohorts to see if clinicians opted for personalised fluid strategies for these patients and if so, whether this had an impact on prognosis.

To explore this further, on our original dataset² we conducted a subgroup analysis to assess for any differences in the management of fluids of patients with end organ failure, which was presented at the 2017 Diabetes UK conference.³ Using blood test results and clinical documentation we identified four groups:

- > patients without established organ damage (ie those not at an obvious risk of fluid overload) (n=197)
- > patients with heart failure (n=8)
- > patients with liver failure (n=11)
- > patients with renal failure (n=39).

In comparison, median values of appropriateness of fluid management in comparison to the JBDS guidelines were 100%, 90%, 80% and 80% in the four groups respectively. Using unequal t-tests these values were not significantly different to one another, suggesting there was not actually variation in the practice of early fluid prescription during the management of DKA. Although limitations persist in terms of case identification and sample size, this is an attempt to assess whether clinicians are considering the risk of fluid overload in these high-risk patients. We certainly believe further research should be done to explore the appropriate management of fluid in patients with end organ damage. ■

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