



Letter to the Editor

Risk of hypoglycemia in hospitalized patients with diabetes mellitus



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We read with interest the review article by Yosefa Bar-Dayana et al., “Hypoglycemia-simplifying the ways to predict an old problem in the general ward” that has been published online in the European Journal of Internal Medicine [1].

The article presents the results of a retrospective cohort study based on analysis of data of 3410 patients with diabetes mellitus hospitalized in one hospital during 2012 which set out to determine the risk factors for hypoglycemia during the period of hospital stay. The authors concluded that hospitalized patients with diabetes and low hemoglobin, low albumin or high creatinine levels are at increased risk of developing significant hypoglycemia.

The authors should be congratulated on their efforts to collect and analyse such a large amount of data, leading to a profound debate and highlighting this very important topic.

Although we agree with most of the authors' conclusions, we would like to make at least two comments.

First, decompensated liver cirrhosis is known as a risk factor for hypoglycemia in both diabetic [2] and in non-diabetic subjects [3]. Severe hypoglycemia was reported also in connection to cardiogenic liver failure [4]. Although a low level of albumin may indirectly point to liver failure, it could also be a part of diabetes kidney disease. It would be interesting to see an analysis of the risk of hypoglycemia connected to elevated parameters such as bilirubin, alanine transaminase, aspartate transaminase, and g-glutamyl transferase and ammonia.

Secondly, type 1 diabetes patients experience hypoglycemia more frequently compared with type 2 diabetes patients treated with multiple dose insulin regimen [5]. Therefore we believe that a separate analysis of data according to these two groups could throw further light into this important topic.

We respectfully suggest taking these points into account especially if a study continuation is planned.

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Conflict of interest statement

Both the authors declared no conflict of interest.

Compliance with ethical standards

This article does not contain any studies with human participants or animals performed by any of the authors.

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References

- [1] Bar-Dayana Y, Wainstein J, Schorr L, Derazne E, Schorr Y, Jakubowicz D, et al. Hypoglycemia- simplifying the ways to predict an old problem in the general ward. *Eur J Intern Med* 2018. <https://doi.org/10.1016/j.ejim.2018.10.007>. (pii: S0953-6205(18)30400-X).
- [2] Gundling F, Seidl H, Strassen I, et al. Clinical manifestations and treatment options in patients with cirrhosis and diabetes mellitus. *Digestion* 2013;87:75–84.
- [3] Pfortmueller CA, Wiemann C, Funk GC, Leichtle AB, Fiedler GM, Exadaktylos AK, et al. Hypoglycemia is associated with increased mortality in patients with acute decompensated liver cirrhosis. *J Crit Care* 2014;29(2). <https://doi.org/10.1016/j.jcrc.2013.11.002>. 316.e7–12.
- [4] Liang Y, Bennett JM, Coursin DB, Rice MJ. Complete neurologic recovery from extreme hypoglycemia secondary to cardiogenic liver failure. *A & A Case Rep* 2017;9(8):236–8. <https://doi.org/10.1213/xa.0000000000000575>.
- [5] Silbert R, Salcido-Montenegro A, Rodriguez-Gutierrez R, Katabi A, McCoy RG. Hypoglycemia among patients with Type 2 diabetes: epidemiology, risk factors, and prevention strategies. *Curr Diab Rep* 2018;18(8):53. <https://doi.org/10.1007/s11892-018-1018-0>.

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