Methods used to measure postoperative insulin resistance

Ozlem Korkmaz Dilmen¹

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Editor,

I read with interest the recent article by Canbay et al. [1].

The authors investigated the effect of the preoperative oral carbohydrate (POC) treatment on development of the postoperative insulin resistance following radical prostatectomy, and they concluded that POC treatment reduces insulin resistance in the postoperative period. But they did not mention which method was used to measure insulin resistance. Various techniques are being used to analyze insulin resistance. Although the hyperinsulinemic normoglycemic clamp technique is the gold standard, its implementation is very difficult. The homeostatic model assessment–insulin resistance equation [$\text{HOMA-IR} = \text{fasting insulin } (\mu\text{g mL}^{-1}) \times \text{fasting blood glucose } (\text{mg dL}^{-1})/405$], artificial pancreas with a closed loop system and quantitative insulin sensitivity check index are other methods that use to measure insulin resistance [2]. Besides this, due to

insulin resistance not only occurring following starvation, prolonged fasting time, surgery and trauma, but also as a normal component of the diurnal rhythm, overnight fasting reduces insulin sensitivity before breakfast. Therefore, obtained blood samples timing should be clarified (morning or evening, etc.).

References

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✉ Ozlem Korkmaz Dilmen
korkmazdilmen@gmail.com

¹ Department of Anaesthesia and Intensive Care, Cerrahpasa Medical Faculty, University of Istanbul, Cerrahpasa, 34098 Istanbul, Turkey