

algorithm. However, in terms of glucose levels in the target range, the rather complex dynamic scale protocol (as used in London, U.K.) tended to be inferior when compared with the MPC algorithm; this supports our views that tight glucose control in the ICU is not exclusively dependent on the protocol but also on clinical features such as different methods of nutritional provision and intuitive decision making of the ICU staff. A clear advantage of an automated algorithm is the avoidance of the intuitive decision making, integration of nutritional information, and the continuity of the day-and-night operation. An extension of our work for different study populations and the reduction of the sampling frequency are clearly required. An enhanced version of the MPC algorithm using extended blood sampling is currently being tested in a multicenter trial at medical ICUs. We regret that our conclusion that “the MPC algorithm is safe and effective in controlling glycemia in critically ill postsurgery patients” was interpreted as “computer can beat man.” What we meant was that “computer can help man” to implement tight glycaemic control and save numerous lives in intensive care medicine.

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References

1. Ligtenberg JJM, Meertens JH, Monteban-Kooistra WE, Tulleken JE, Zijlstra JG: Multicentric, randomized, controlled trial

to evaluate blood glucose control by the model predictive control algorithm versus routine glucose management protocols in intensive care unit patients (Letter). *Diabetes Care* 29:1987, 2006

2. Plank J, Blaha J, Cordingley J, Wilinska ME, Chassin LJ, Morgan C, Squire S, Haluzik M, Kremen J, Svacina S, Toller W, Plasnik A, Ellmerer M, Hovorka R, Pieber TR: Multicentric, randomized, controlled trial to evaluate blood glucose control by the model predictive control algorithm versus routine glucose management protocols in intensive care unit patients. *Diabetes Care* 29:271–276, 2006

3. Meijering S, Corstjens AM, Tulleken JE, Meertens JHJ, Zijlstra JG, Ligtenberg JJ: Towards a feasible algorithm for tight glycaemic control in critically ill patients: a systemic review of the literature. *Crit Care* 10:1–7, 2006

Incidence of Type 2 Diabetes in Individuals With Central Obesity in a Rural Japanese Population: The Tanno and Sobetsu Study

Response to Ohnishi et al.

Ohnishi et al. (1) applied International Diabetes Federation criteria of central obesity for Japanese patients (waist circumference ≥ 85 cm in men and ≥ 90 cm in women) in their study evaluating the relative importance of central and general obesity for incidence of type 2 diabetes in Japan. These International Diabetes Federation criteria of abdominal obesity were proposed by the Examination Committee of Criteria for “Obesity Disease” in Japan set up by the Japanese Society for the Study of Obesity (2) and are a result of the inappropriate presupposition that there are no sex differences in cut points of visceral fat area and that visceral fat area is linearly proportional to waist circumference, as mentioned previously (3). If they had determined the cut points of waist circumference by receiver-operating characteristic curves as they did to determine the cut points of BMI and visceral fat area and those of visceral fat area separately by sex, the cut points of waist circumference

might have been different values. For example, Shiwaku et al. (4) reported that optimal cut points of waist circumference were 82 cm for men and 73 cm for women in Japanese, and Hara et al. (5) recently proposed 83–85 cm for men and 73–78 cm for women as optimal cut points of waist circumference for the diagnosis of metabolic syndrome in Japan. Sone et al. (6) recalculated the risk of metabolic syndrome for cardiovascular events in Japanese diabetic patients, applying Asian cut points for waist circumference (90 cm for men and 80 cm for women) instead of Japanese criteria (85 cm for men and 90 cm for women) and reached different results from their previous reports (7,8). Therefore, Ohnishi et al. should also re-analyze their data applying these proposed cut points by Hara et al. and Asian criteria of central obesity (≥ 90 cm in men and ≥ 80 cm in women) separately by sex before reaching conclusions on the relative prognostic importance of central and general obesity in Japan.

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References

1. Ohnishi H, Saitoh S, Takagi S, Katoh N, Chiba Y, Akasaka H, Nakamura Y, Shimamoto K: Incidence of type 2 diabetes in individuals with central obesity in a rural Japanese population: the Tanno and Sobetsu Study. *Diabetes Care* 29:1128–1129, 2006

2. The Examination Committee of Criteria for “Obesity Disease” in Japan: New Criteria for “Obesity Disease” in Japan. *Circ J* 66:987–992, 2002

3. Oda E: Cut points of waist circumference (Letter). *Diabetes Care* 29:1188–1189, 2006

4. Shiwaku K, Anuurad E, Enkhmaa B, Nogi A, Kitajima K, Yamasaki M, Yoneyama T, Oyunsuren T, Yamane Y: Predictive values of anthropometric measurements for multiple metabolic disorders in Asian populations. *Diabetes Res Clin Pract* 69:52–62, 2005

5. Hara K, Matsushita Y, Horikoshi M, Yoshiike N, Yokoyama T, Tanaka H, Kadowaki T: A proposal for the cutoff point of waist circumference for the diagnosis of metabolic syndrome in the Japanese pop-

