



Editorial

Glycaemic control in diabetic patient: Towards a global care of glycaemia



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The perioperative glycaemic control by intravenous insulin therapy is a treatment developed at the beginning of the 21st century on the basis of the Belgian works from Van den Berghe et al. [1], performed in ICU. Then, numerous publications followed one another to show the deleterious effects of acute stress hyperglycaemia: as the alteration of polymorphonuclear neutrophils activity [2], the increase of surgical site infections [3], the endothelial dysfunction [4], the abolition of cardiac preconditioning [5,6], the increase of major cardiovascular events [7], the increased length of hospital stay [8], and especially as the magnitude of variations of blood glucose concentrations is high [9]. Then, during the perioperative period, the tight glycaemic control became the new gold standard in healthcare for all patients, diabetic or not. Nevertheless, a few years later, the results from the NICE SUGAR trial contribute to highlight the difficulty to obtain a tight glycaemic control without any deleterious hypoglycaemia, events directly correlated to the increase of postoperative mortality [10,11]. Then, especially in diabetic patients, the threshold of blood glucose concentration had to be enhanced to a range between 7.7 and 10.0 mmol.L⁻¹, target limiting the hypoglycaemic events without any reduction of beneficial effects [12]. Whatever, if intravenous insulin therapy is unmistakably considered as the cornerstone of acute stress hyperglycaemia, a more global approach of the diabetic disease per se appears as a crucial point leading both to detect the numerous unknown diabetic patients and to prepare the patients to the surgical stress as well, with the more stable as possible daily blood glucose concentration. This is the reason why Cheisson et al. [13] developed guidelines for the French Society of Anaesthesia and Intensive Care Medicine (SFAR) and the French Society of Diabetes (SFD). In this outstanding work, proposed with an additional help to diagnosis supports, the authors developed a global strategy to evaluate the stability of diabetes disease using the HbA1c measurement. Then, a too low preoperative HbA1c (<5%) is

correlated to numerous silent hypoglycaemias, while an increased HbA1c ($\geq 9\%$) shows unstable diabetes at high risk of complications, all these situations being source of dangerous perioperative blood glucose concentration disorders. In addition, the present guideline highlights the importance to look for abnormalities associated with diabetes such as gastroparesis, autonomic neuropathy, cardiomyopathy and nephropathy, which are known to increase the perioperative morbi-mortality of these patients [7,14–20]. To finish, authors underline also the importance of both pain control strategy and prevention of nausea and vomiting, extending the oral anti-diabetic medication withdrawal, for the prevention of acute stress hyperglycaemia.

In conclusion, these guidelines are invaluable tools for the physician in charge of diabetic patients, offering the advantage to detect, anticipate and manage the diabetic disease to avoid large perioperative variations of blood glucose concentrations and improve the survival rate of these patients.

Disclosure of interest

The authors declare that they have no competing interest.

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