Letters to the Editor

Letter to the editor regarding: development and validation of a point-of-care clinical risk score to predict surgical site infection following open spinal fusion by Mueller

To the Editor,

We read with great interest the article by Mueller et al. [1] entitled "Development and validation of a point-of-care clinical risk score to predict surgical site infection following open spinal fusion" . The aim of this study was to develop and validate a surgical-site infection (SSI) risk-assessment score for patients undergoing open spine surgery.

A database of adult open spine surgery patients was used to create an SSI risk scoring system using mixed effects logistic regression modeling. This model used 16 predictors. Sum of 16 predictors were assigned as the resulting risk score which are: female sex, hypertension, blood disorder, peripheral vascular disease, chronic pulmonary disease, rheumatic disease, obesity, diabetes, nicotine dependence, Charlson Comorbidity Index, revision surgery, number of ICD-10 procedures, operative time and emergent surgery. The authors concluded that the resulting SSI risk score composed of readily obtainable clinical information could serve as a strong prediction tool for SSI in preoperative settings when open spine surgery is considered. There is major point to be discussed further.

Diabetes mellitus (DM) is a chronic systemic disease known to have several major consequences on major vital systems of the organisms. HbA1c is an indicator used to determine the measure of average blood glucose levels for the last 3 months and therefore is used as the gold-standard parameter for predicting the relative risk of diabetes complications [2].

Tracking the HbA1c changes in time, which is also associated with certain risks, could warn the clinicians about the potential complications. In a very recent trial, Scott et al. [3] concluded that there is an increased risk of complication occurrence by increasing variability of HbA1c for both microvascular and macrovascular endpoints.

The American Diabetes Association is currently recommending to keeping HbA1c levels below 7.0 prior to elective surgery for optimal reduction of postoperative complications [4]. There are also some very important articles mentioning the optimal HbA1c levels regarding SSI rates in neurosurgical practice [5,6]. These trials are indicating a threshold of HbA1c values that a clinician should focus on during preoperative assessment of neurosurgical patients and HbA1c levels above these thresholds are concluded to be associated with worse outcomes like SSI.

Given the above mentioned concerns and the relevance of HbA1c with major/ minor complications in patients undergoing spine surgery is it possible to adhere HbA1c as a major risk stratification parameter and analyze regarding SSI after spine surgery which means evaluating a diabetic patient thoroughly?

We believe that clarification of this issue will improve the anesthetic management of patients undergoing spine surgery.

Declarations of Competing Interests

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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