



Invited Commentary

An invited commentary on “use of vital signs in predicting surgical intervention in a South African population: A cross-sectional study”



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Trauma is an important cause of morbidity & mortality globally, the consequences of which are encountered majorly in low and middle income countries. Prehospital and in-hospital trauma management plays the key role to decrease the incidence of preventable deaths. The appropriate use of physical examination and vital signs along with laboratory and radiologic evaluations will avoid either the delays in treatment, or overtreatment issues. In addition to these standard methods of trauma care, epidemiologic factors, shock indexes and the injury mechanisms are other established parameters that assist in the evaluation of the trauma patient [1–4]. All these tools aid in clinical decision making and predicting prognostic issues regarding surgical and/or nonoperative treatment, transfusion indications, mortality and disability.

In their study, Azad et al. investigated the association of the vital signs and the indication for surgery in trauma patients where they found that the parameters predictive of the need for a surgical intervention were systolic blood pressure, tachycardia, tachypnea, hypothermia and the Revised Trauma Score. Additional predictive parameters were determined as male gender and the mechanism of injury [5]. In this study, all emergency surgical procedures including abdominal, orthopedic, cranial surgeries as well as surgical debridement were evaluated without exception, while from the abdominal surgical point of view, the same were also found to be significantly associated with the decision of emergency laparotomy or laparoscopic interventions. The most powerful feature of this study is its large sample size of 7857 patients, which is expected to make contribution to the trauma literature. On the other hand, its retrospective design is a drawback.

The inclusion of surgical procedures on all organ systems without any subclassification in the univariate and multivariate analyses leads to difficulties in perception of the results. Nevertheless, having also evaluated the laparotomies/laparoscopic interventions that constituted

the largest subgroup introduced interesting results. However, particular circumstances not having been mentioned in the study, such as anterior abdominal firearm injuries those were indicated for surgery without taking the vital signs into account, or negative laparotomies performed for abdominal injuries, have been considered as certain weak points. In addition, in the present study, it was not clearly demonstrated whether the laparoscopic interventions for abdominal injuries were performed for diagnostic, or therapeutic intentions, thus, it has also been considered that this issue could have affected the subgroup analysis results.

In trauma surgery, algorithms for nonoperative approach are increasingly implemented in clinical practices [4]. For abdominal trauma, after an adequate initial fluid resuscitation, hemodynamically stable blunt and stab injury cases without signs of peritonitis may be closely followed-up nonoperatively as the routine use of this approach is widely accepted by many trauma centers [2].

Although the vital parameters investigated in this study are accepted as major prognostic factors, it should be kept in mind that an exact assessment for the indication of surgery is a hard task which does not solely depend on the vitals only, but also necessitates the use of well known adjuncts including laboratory and radiologic evaluations in addition to physical examination.

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