Background Severe acute pancreatitis (SAP) has high mortality and its early identification is important for management and risk stratification. The bedside index for severity in acute pancreatitis (BISAP) is a simple scoring system within the first 24 hours of admission which predicts the severity of pancreatitis. There were no studies designed to validate this system according to the 2012 revised Atlanta classification in Vietnam and more data are needed before clinical practice.

Aims To evaluate the BISAP score in prognostication of acute pancreatitis (AP).

Methods A prospective observational study of 68 patients presenting with AP in Thai Nguyen National Hospital from May 2018 to February 2019 were included in the study. All the patients were calculated and stratified according to the BISAP score within the first 24 hours of admission. Computerized abdominal scans are used for diagnosis and evaluation of patients with AP. SAP was defined as the persistence of organ failure for more than 48 h. The capacity of the BISAP to predict severity, pancreatic necrosis and organ failure were evaluated using linear-by-linear association. The predictive accuracy of the BISAP score was measured as the area under the receiver operating characteristic curve (AUC).

Results SAP accounted for 20.58%. Pancreatic necrosis accounted for 21.23%. Organ failure accounted for 20.58%. A BISAP score of ≥ 3 was a statistically significant cutoff value. Risks of SAP were increased among group of BISAP ≥ 3 (OR: 51.56; 95% confidence interval (CI): 3.23 – 698.56). BISAP in predicting SAP (AUC: 0.823; 95% CI: 0.71 – 0.921) and organ failure (AUC: 0.871; 95% CI: 0.73 – 0.921). BISAP ≥ 3 predicted SAP with sensitivity: 69.65%, specificity: 97.89%, positive predictive values: 82%, negative predictive values: 96.3%.

Conclusions The BISAP predicts severity and organ failure in AP very well. BISAP score may be a valuable tool for risk stratification and prognostic prediction in Vietnamese patients with AP.

Acute pancreatitis (AP); BISAP score (Bedside index of severity in acute pancreatitis score).