



COMPARISON OF SCALES APACHE II AND BISAP IN THE PROGNOSIS OF ACUTE PANCREATITIS IN A HOSPITAL IN PERU

COMPARACIÓN DE LAS ESCALAS APACHE II Y BISAP EN EL PRONÓSTICO DE
PANCREATITIS AGUDA EN UN HOSPITAL DEL PERÚ

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Mr. Editor

I have read the article "Comparison of APACHE II scales and BISAP in the prognosis of acute pancreatitis in a hospital in Peru" by García-Revilla et al⁽¹⁾, where they make a comparison of both scales in the prognosis of organ failure in hospitalized patients with acute pancreatitis in a public hospital in Peru. In this context, I would like to comment on the methodology used in this article.

We know that to evaluate the severity in patients with acute pancreatitis, we have the APACHE II scale, which is the gold standard and is used as a comparator for assessing other scales. Remember that it evaluates the physiological variables which reveal the state of organ failure and has a second part where the patient's comorbidities are considered⁽⁴⁾, we also have the BISAP scale, which assesses five variables: urea nitrogen values, age, consciousness compromise, presence of pleural effusion and inflammatory response syndrome (SIRS)⁽²⁾; These scales share values such as heart rate, respiratory rate, and temperature, it is these variables that will be influenced by chronic pathologies such as cardiovascular, respiratory, kidney or oncological diseases, among others.

In this context, we must remember that non-communicable diseases kill 71% of the population between 30 and 70 years of age worldwide; deaths from cardiovascular diseases represent the majority of cases (17.9 million people per year), followed by oncological diseases (9 million per year) and respiratory diseases (3.9 million)⁽³⁾, in Peru non-communicable diseases represent 58.5% of the diseases with the highest incidence and generate greater disability⁽⁴⁾.

Therefore, the study mentions the exclusion of patients with any pathology that increases the length of hospital stay, such as chronic kidney failure, chronic obstructive pulmonary disease, heart disease, oncological diseases, and those with a history of chronic pancreatitis. Compared to other studies on the same topic, where this type of exclusion does not apply, the question arises: Why do the authors exclude patients with comorbidities? We do know that these pathologies increase the morbidity and mortality of the subject, aggravating their initial state in the face of inflammatory processes, such as acute pancreatitis, and more if an infectious process is added.

For example, in a Peruvian study carried out by Pérez et al,⁵ where they do not perform any type of exclusion, they obtain that the area under the curve (AUC) for the APACHE II scale is 0.854, the sensitivity is 85.71%, the specificity is 76.14%, while the AUC for BISAP is 0.872, sensitivity of 60.71%, specificity of 91.83%, they conclude that these scales can be applied to identify patients with low risk of severity; In another study carried out by Harshit et al,⁶ with similar methodology, an AUC for APACHE II is 0.855,

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Cite as: Annie Velasquez-Manrique. Comparison of scales apache ii and bisap in the prognosis of acute pancreatitis in a hospital in peru. Rev. Fac. Med. Hum. July 2021; 21(3):680-681. DOI 10.25176/RFMH.v21i3.3733

Journal home page: <http://revistas.urp.edu.pe/index.php/RFMH>

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sensitivity of 92.86%, specificity of 69.44%, the AUC for BISAP 0.822 with a sensitivity of 90% and specificity Of 83.87%, due to the small sample size, they are limited in giving statements about the usefulness of the scales to predict organ failure, they only conclude that the APACHE II scale is a useful tool to predict the development of serious disease; while García-Revilla et al⁽¹⁾, where they applied the exclusion criterion of patients with comorbidities, obtained an AUC for APACHE II is 0.996, sensitivity of 66%, specificity of 99%, the AUC for BISAP 0.957, sensitivity of 83%, specificity of 99%, so although in the study they obtain very favorable results as they have an AUC very close to unity, which indicates its high sensitivity and specificity, they also indicate that the severity of the condition is associated with a longer hospital stay.

Making a comparison of these two studies, both with small sample size, it is observed that the study by Harshit et al⁽⁶⁾ was able to predict the development of severe disease in patients, while the study by García-Revilla et al⁽¹⁾ point out that had a low frequency of patients with severe acute pancreatitis, limiting their predictive power for the severity of the condition, this could be explained by the exclusion of patients with comorbidities, rather than by the small sample size since patients with chronic diseases aggravate the condition initial reason why they have a greater probability of organ failure.

It is necessary to remember the importance of the selection criteria when proposing diagnostic studies, considering the implications of excluding certain patients.

Authorship contributions: The author participated in the conception, writing, revision and final approval of the manuscript.

Financing: Self-financed.

Interest conflict: The author declares no conflict of interest in the publication of the article.

Received: March 02, 2021

Approved: May 20, 2021

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