

Author's Reply**Re: How to predict the severity of acute pancreatitis? An on-going debate**

Dear Köksal,

Thank you for your letter. You must be devoted to the research of acute pancreatitis for a long time, and your question is interesting and worthy to consider deeply.

We also found the positive predictive values of serum calcium, PaO₂, base excess levels, BISAP and APACHE II scores, and EPIC score were low. The reason might be the study design itself. This study aimed to assess and compare the ability of laboratory markers and scoring systems to early predict organ failure. In order to make sure "early prediction", we made up strictly "Exclusion criteria". When collecting data, all laboratory tests were conducted in the emergency room prior to admission or within 24 hours after admission, and APACHE II and BISAP scores were calculated using data obtained within the first 24 hours. Perhaps this was the reason why most positive predictive values were low. When referring to APACHE II, there was another reason. The cutoff value of APACHE II (≥ 8) was previously determined at data collecting stage, which might be too big in this patient series.

The predicting value also including specificity and negative predictive value, and you will find most specificity and negative predicting values were encouraging. In our study, serum calcium, PaO₂, and base excess were independent predicting values, so we concluded that they had the highest predictive value, although the predicting accuracy was not high.

We try to analyze the predict value of hematocrit level in this study according to your advise, and there was no statistically difference between patients with and without organ failure (41.8% vs 40.6%).

In this study, most CT scans were done in order to assist the diagnosis of acute pancreatitis and assess biliary tract. If necrosis was suspected, another CT scan was often done one week after onset. We don't recommend all patients accepting CT scan on admission. However, if there's an unclear diagnosis, for example asymptomatic patient with the rising of serum amylase, CT scan is recommended.

We didn't record fluid resuscitation protocol in this study, but we thought fluid resuscitation protocols in transient and persistent organ failure groups were similar theoretically, because nobody could exactly predict the during time of organ failure when it happened, and doctors had no choice except giving similar treatments.

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