Commentary

Open Access

Review on "Potential Effects of Calcium Binding Protein S100A12 on Severity Evaluation and Curative Effect of Severe Acute Pancreatitis"

Zhang Feng[1*], Zhan Yinchu[2], Zhu Yingqian[1] and Lu Jiping[1]

[1]Department of Hepatopancreatobiliary Surgery, Tongren people's Hospital of Guizhou Medical University, Tongren, Guizhou, China

[2]Department of Hepatopancreatobiliary Surgery, International Hospital of Zhejiang University, Shulan (Hangzhou) Hospital, Hangzhou, China

[*]**Corresponding author:** Zhang Feng, Department of Hepatopancreatobiliary Surgery, Tongren people's Hospital of Guizhou Medical University, Tongren, Guizhou-554300, China, Tel: +86 13874815775; E-mail: jonathan.cheung@foxmail.com

Citation: Feng Z, Yinchu Z, Yingqian Z, Jiping L (2018) Review on "Potential Effects of Calcium Binding Protein S100A12 on Severity Evaluation and Curative Effect of Severe Acute Pancreatitis". J Infect Dis Ther 6: 366. Doi: 10.4172/2332-0877.1000366

Commentary

Feng and colleagues investigated the role of the calcium binding protein S100A12 in severe acute pancreatitis and the potential effects of calcium binding protein S100A12 on curative effect of severe acute pancreatitis induced by caerulein and lipopolysaccharide in mice. They reported that severe acute pancreatitis is induced by caerulein and lipopolysaccharide in mice and recombinant S100A12 antibodies decreased its severity. Feng's team came to a conclusion that S100A12 recombinant antibodies were able to significantly reduce the severity of acute pancreatitis induced by caerulein and lipopolysaccharide in mice. Serum S100A12 might serve as a useful marker for disease curative effect in mice with severe acute pancreatitis. They also suggested that "S100A12 is a mediator not just a marker of the inflammatory response in pancreatitis" [1].

The study by Feng's team reports that significant improvement in pancreatic interstitial edema, inflammatory infiltration, parenchyma necrosis, and hemorrhage via blocking of S100A12 in mice model. But their study does not address whether it is specific for pancreatitis. The most notable finding of their study is that an antibody against S100A12 does block the inflammatory mediators as well as the histological findings of pancreatitis.

Some other study has also proved this similar conclusion, not only in mice, but also in human beings. Fang Jian's team tested the serum S100A12 levels in 64 acute pancreatitis patients in 24 hours after the illnessSerum S100A12 levels were compared to the severity of acute pancreatitis, they used ROC curve of serum S100A12, APACHE-II and Ranson scoring system to estimate the severity of acute pancreatitis. Fang Jian's team evaluated the correlation between human serum S100A12 level and severity of acute pancreatitis. They reported that human serum S100A12 levels elevated at early stage of acute pancreatitis, serum S100A12>285.32 ng/ml represents high risk of severe acute pancreatitis, which is more sensitive and accurate than APACHE-II and Ranson scoring system [2].

Acute pancreatitis is the most common pancreatic lesion and its morbidity rate is also showing a trend of rising year by year, which poses a great threat to human health and social economy. While we still use the APACHE-II, Glasgow, and Ranson scoring system etc. to evaluate the severity and prognosis of acute pancreatitis. But the sensitivity and specificity of these evaluation methods for early diagnosis of severe acute pancreatitis cannot meet the clinical demand, and also have the limitations of complex detection and high cost. Therefore, to find a simple and effective evaluation method becomes strongly necessary.

Calcium binding protein S100A12 has a highly specific expression and plays a very important role in regulating the inflammation in many diseases. By inhibiting the expression of S100A12, the excessive activation of neutrophils will be controlled, which will weaken the inflammatory reaction of severe acute pancreatitis by reducing the release of inflammatory mediators, therefore, the severity of acute pancreatitis is reduced. Through the work of basic research and clinical research by Feng's team and Fang Jian's team, we could hold great promise that S100A12 can be used to monitor the development and prognosis of severe acute pancreatitis in both mice and human. Cause "This may represent a novel therapeutic strategy for severe acute pancreatitis".

References

1. Feng Z, Yinchu Z, Yinsheng S, Fengqing W, Xiaoyang Z, et al. (2015) Potential effects of calcium binding protein S100A12 on severity evaluation and curative effect of severe acute pancreatitis. Inflammation 38: 290-297.

2. Jian F (2016) Human serum S100A12 level and severity of acute pancreatitis. Chin J Gen Surg 31: 585-589.