

Are chemokine and cytokine effective markers of chronic pancreatitis?

December 1 2008

Chronic pancreatitis (CP) is a chronic clinical disorder characterized by irreversible damage to the pancreas, the development of histologic evidence of inflammation and fibrosis, and eventually the destruction and permanent loss of exocrine and endocrine tissue. Imaging or function tests may not reveal early CP, and the results of these tests do not necessarily correlate with each other.

A research team led by Tetsuhide Ito from Japan investigated whether serum chemokine and cytokine levels can become useful biological and functional markers to assess the severity of chronic pancreatitis. Their results will be published on November 14, 2008 in the *World Journal of Gastroenterology*.

One hundred nine patients with CP who fulfilled clinical diagnostic criteria for CP by the Japan Pancreas Society and 116 healthy controls were selected for this study. Serum monocyte chemoattractant protein-1 (MCP-1), transforming growth factor beta-1 (TGF-beta1), and soluble type fractalkine (s-fractalkine) concentrations were examined. Relationships between stage-specific various clinical factors and serum MCP-1, TGF-beta1, and s-fractalkine levels were investigated. Furthermore, 57 patients with non-alcoholic CP were similarly evaluated in order to exclude influence of alcohol intake.

Their results showed that patients with CP showed significant higher levels of serum TGF-beta1 and s-fractalkine, but not MCP-1, compared

to the controls. Serum TGF-beta1 in the severe stage and s-fractalkine in the mild and the severe stage of CP significantly increased compared to those of controls. However, it was observed that both TGF-beta1 and s-fractalkine levels were affected by alcohol intake. In patients with non-alcoholic CP, serum TGF-beta1 showed significant increase in the moderate stage of CP, and serum s-fractalkine revealed significant increase in the early stage of CP.

Their results indicated that the measurement of serum F-fractalkine is useful to diagnose earlystage CP. Moreover, the combined determination of both, s-fractalkine and TGF-beta1, in human sera may be helpful in evaluating the severity status of CP.

Source: World Journal of Gastroenterology

Citation: Are chemokine and cytokine effective markers of chronic pancreatitis? (2008, December 1) retrieved 21 December 2022 from <https://medicalxpress.com/news/2008-12-chemokine-cytokine-effective-markers-chronic.html>

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