

**Serum biochemical and histological changes in
caerulein-induced acute pancreatitis in rats: a
correlative study**

黃千玲

CHEN-LING HUANG;SHIANN PAN;GI-SHIH

LIEN;SHENG-HSUAN CHEN

摘要

Abstract

We investigated correlations between serum biochemical changes and pathological alterations in caerulein-induced acute pancreatitis in rats. Seven consecutive doses of caerulein consisting of 50 μ g/kg, were given intraperitoneally, in 40 male Sprague-Dawley rats at hourly intervals. Serum biochemical and histological changes of the rats were studied at hours 7, 9, 12, 18, 24 and 36 after the first injection, as well as day 3 and 5 respectively. Serum amylase in the controlled rats ($n = 6$) was 2549 \pm 221 U/L (mean \pm SE). It was elevated to twenty times that of the baseline value (52630 \pm 11397 U/L) at the seventh hour, declined to about two times the control (5520 \pm 800 U/L) at the 18th hour, and returned to the baseline level at the 24th hour after the first caerulein injection. Serum lipase, elevated since the 7th hour, reached its peak value (631 \pm 34 U/L) at the 12th hour, then declined abruptly to the baseline value (0 U/L) at the 24th hour, after the first injection. However, severe histological changes of the pancreas were apparent at the 7th hour, reaching maximal destruction at the 18th hour, with severe inflammatory changes at the 24th hour; all after the first injection. The frank inflammation did not subside until 5 days after the first injection. These results suggest that, in the case of acute pancreatitis, normalization of serum biochemistries does not indicate recovery of the pancreas from acute inflammation.