Chymase activity, collagen fiber and hydroxyproline content expression in patients with chronic active hepatitis b

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View from specialist: It is creative, and of certain scientific and educational value.

[ABSTRACT] Objective: To explore chymase activity, collagen fiber and hydroxyproline content expression in patients with chronic active hepatitis b. Methods: A total of 100 patients with chronic active hepatitis b were selected, and had liver biopsy to determine the degree of liver fibrosis stage and grade of inflammatory activity. The relative content of collagen fibers was measured, and chymase activity in liver tissue was measured by enzyme-linked immunosorbent assay. Content of collagen fiber was determined by gastric enzyme acid hydrolysis, and HBV - DNA content was determined by fluorescent quantitative PCR. Results: In liver tissue collagen fiber content was (0.13±0.05) mmol/L, chymase activity was (24.77±15.08) ng/mg, hydroxyproline content was (20.84±7.46) μmol/L, the HBV - DNA level was (9.04±1.44) log10 IU/mL; Collagen fibers, chymase activity and hydroxyproline content at stage S1 + S2, S3 + S4 were higher than those at S0 stage (P < 0.05), while these at S3 + S4 stage were significantly higher than those at S1 + S2 (P < 0.05); Collagen fiber, chymase activity and hydroxyproline content at G3 + G4 were significantly higher than these at G1 + G2 (P < 0.05); Collagen fibers, chymase activity and hydroxyproline content had positive correlation with S stage and grade of G (P < 0.05). Collagen fiber, chymase activity and hydroxyproline content, S stage and grade of G had positive correlation with HBV - DNA levels (P < 0.05). Conclusions: Collagen fiber, chymase activity and hydroxyproline content in chronic active hepatitis b patients are increased with the increasing degree of fibrosis stage and grade of inflammatory activity, its content is closely associated with HBV - DNA level.

[KEY WORDS] Chronic active hepatitis b; Collagen fiber; Chymase; Hydroxyproline; HBV - DNA