

A Retrospective Analysis of Bilirubin Patterns after ERCP drainage in Patients with Chronic Liver Di

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Background/Aims: When following up on bilirubin level changes after ERCP, most ERCP doctors are aware that bilirubin levels in patients with chronic liver disease do not improve well. However, there is a lack of research on how slow the process is. This study aimed to evaluate and compare the patterns of serum bilirubin after bile drainage with ERCP in patients with non-chronic liver disease and with chronic liver disease.

Methods: In single tertiary center, 726 patients with or without chronic liver disease who underwent ERCP were enrolled in a retrospective analysis. We recorded changes in serum bilirubin after ERCP with drainage and analyzed the pattern of serum bilirubin change. First, patients were divided into groups with or without chronic liver disease, and further analyzed depending on whether the group with chronic liver disease had cirrhosis or not.

Results: 480 patients without chronic liver disease showed a higher ratio of normalized serum bilirubin compared to 246 patients with chronic liver disease (376/387, 97.16% vs. 120/193, 62.18%, $p < 0.001$). The non-chronic liver disease patient group showed a lower crescendo-decrescendo pattern of serum bilirubin than the chronic liver disease group (88/480, 18.33% vs. 120/246, 48.78%, $p < 0.001$) and a earlier improvement in serum bilirubin in the crescendo-decrescendo pattern (1.48 ± 0.79 vs. 5.48 ± 4.75 , $p < 0.001$). Subgroup analysis to compare non-cirrhotic and cirrhotic group of chronic liver disease patients revealed differences in days until normalization or recovery to baseline serum bilirubin, showing delay in cirrhotic group (36.56 ± 49.61 vs. 105.91 ± 159.70 , $p = 0.004$, 23.20 ± 16.77 vs. 59.21 ± 39.75 , $p < 0.001$).

Conclusions: This study provides additional information on the slowly improving post-ERCP serum bilirubin levels of patients with chronic liver diseases. This information may be valuable in assessing the successfulness of drainage after ERCP.

