

Decreased serum antioxidant marker is predictive of early recurrence in the same segment after radical ablation for hepatocellular carcinoma

Abstract

Radiofrequency ablation (RFA) for hepatocellular carcinoma (HCC) is a promising method for controlling the tumors, although recurrence do exist. Oxidative stress is associated with the progression of hepatocarcinogenesis, while also acting as an anticancer response. The objective of the present study was to investigate the factors influencing an outcome after RFA. We recruited 235 newly diagnosed HCC patients who received RFA for single tumors. The patients with recurrence were sub-grouped into an early or segmental recurrence group. The characteristics of the sub-grouped patients including oxidative stress marker reactive oxygen metabolites (dROM) and antioxidant marker OXY-adsorbent tests were evaluated. The factors associated with a poor survival were a high Child-Pugh score and early recurrence within two years in the same segment. The patients who experienced recurrence within two years in the same segment showed a larger tumor diameter than did others. According to a multivariate analysis, the OXY values were also significantly low. In conclusion, maintaining the antioxidant reservoir function with a high OXY value might be necessary to prevent early recurrence within the RFA-treated segment.