**Abstract**

**Tumor – Infiltrating CD8+ Lymphocytes of as a Prognostic Factor of Intrahepatic Cholangiocarcinoma**

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**Objective**: To investigate the prognostic significance of density of tumor – infiltrating CD8+ lymphocytes in intrahepatic cholangiocarcinoma

**Method**: We studied 61 cases of intrahepatic cholangiocarcinoma which were surgically resected. Tissue microarray (TMA) was performed on paraffin – embedded sections (2 mm in diameter) by selecting four hotspot areas where lymphocytes intensely infiltrated intratumorally as reviewed via H&E slides. Immunohistochemical stain for CD8 lymphocytes was done. The number of CD8+ lymphocytes was entirely numerated on TMA sections and calculated cell density (cells/mm2). The relationship between density of CD8+ lymphocytes and overall survival was analyzed by using Kaplan – Meier analysis and log – rank test.

**Results**: Of 61 cases, 60% were male and the median age of all patients was 61 years old. The median overall survival after resection was 67 weeks. The median survival time of the CD8high group was 81 weeks (95%CI 63 – 153) and the median survival time of the CD8low group was 38 weeks (95%CI 22 – 65). On multivariate analysis, tumor – infiltrating CD8+ lymphocytes were associated with increased overall survival (HR 0.36, 95%CI 0.18 – 0.71, p- value 0.003).

**Conclusion:** The higher density of tumor – infiltrating CD8+ lymphocytes is a favorable prognostic factor of intrahepatic cholangiocarcinoma.