Several reports point towards an interaction of the HCV core protein with the LT α R, leading to the modulation of the LT αR-signaling pathway [37-40]. The main finding of this study is that HCV infection activates the production of lymphotoxin α, β and their receptor TLRs in human liver tissues as evidenced by immunohistochemical studies.

Our result revealed there is no significant correlation between positive LTβR signaling with age of patients, grade and HAI, while significant correlation with stage of fibrosis of patients with chronic HCV infection, this may be related with activation of TLR-mediated signaling pathways initiating an early inflammatory response are indispensable for protecting the host against pathogenic organisms, an excessive and/or prolonged activation may lead to both acute and chronic inflammatory diseases. Therefore, the intensity and duration of TLR responses must be tightly regulated. Down regulation of TLR signaling, called TLR tolerance, as well as cross-tolerance among various TLR ligands might have been developed to prevent excessive inflammatory damage to the host [43].

Expression of LTβ-R on human fibroblasts and human carcinoma cell lines maintained in vitro has also been described, and stimulation of these cells through LTβ-R can produce growth stimulation, growth arrest, or cytokine production, depending on the cell type [42-44].

The expression of lymphotoxin α and β and their receptor TLRs has been reported by several researchers. The differences between the results of the these researchers and even with the results of present study could be related to many factors, like type of the tissue whether human or mice, sample size, stage of fibrosis, grade of the tumor, the methodology and affinity of the antibody, the duration of incubation, the sensitivity of detection system and lack of standardized technique because these factors also affect the expression of these markers. In conclusion, three members of tumor necrosis factor super family were over expressed in liver tissues and may be have critical role in the liver injures. Further studies are needed with large sample size to indicate the same results.

Acknowledgements

This work was performed at Division of Virology-National Institute for Biological Standards and Control, UK during the period from March-2012 till September-2012 at histopathology laboratory. Special thank for Belinda Dagg for kindly sectioning of the tissue blocks and great thanks for all staff of virology.

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