**MBL2 Polymorphisms are Associated with Leptospirosis Severity Infection**

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Leptospirosis is an important public health problem, classic manifestation of disease is jaundice, acute renal failure and bleeding. Innate immune factors appear to contribute to disease progression, including high levels of the mannose binding lectin (MBL), which was associated with leptospirosis severity. MBL is encoded by **MBL2**; polymorphisms in promoter (-550 and -221) and structural regions (exon-1) are associated with MBL low levels and dysfunction. We investigated the association of **MBL2** gene polymorphism and the admission of patients in the intensive care unity (ICU) as a proxy for leptospirosis severity. Real Time PCR was used to genotyping by the Taqman probes for the identification of promoter regions (-550 and -221) and SYBR GREEN chemistry for exon-1. We enrolled 52 patients with *Leptospira* infection, which 42 were males (81%). The mean age was 32 (±15.8) years. There was no difference in the genotypic frequencies exon 1 SNPs of patients vs. controls; and patients in the ICU group (with-ICU) vs. patients that were not admitted at ICU group (without-ICU). Nevertheless, the diplotype frequency of XA was higher in patient’s without-ICU vs. patient’s with-ICU (p=0.008). Also, the frequency of LXA haplotype was higher in the without-ICU (p=0.046), both XA and LXA codifies for low production of MBL. Thus, these preliminary data showed that XA and LXA genetic components seem to be related to protection against the progression to disease severity.

Word Keys: Leptospirosis, **MBL2**, Polymorphism, Severity, SNP. Supported by: FACEPE