



## Are Boys at Risk of Low Immune Response to Recombinant Hepatitis B Virus Vaccine in Steroid Sensitive Nephrotic Syndrome?

**Tahmina Jesmin**

*Department of Pediatric Nephrology, Bangabandhu Sheikh Mujib University, Dhaka Bangladesh*

### Abstract:

This study was conducted to evaluate the immune response following vaccination with different specific antibody response to Hepatitis B Vaccine (HBVac) in Steroid Sensitive Nephrotic Syndrome (SSNS) patients between boys and girls. **Materials and Methods:** This prospective study was conducted in 30 SSNS children at Bangladesh Institute of Child Health, Dhaka, Bangladesh from July 2012 to June 2013. Thirty patients who had all features of Minimal Change Nephrotic Syndrome (MCNS) according to International Study for Kidney Diseases for Children (ISKDC) and received oral prednisolone every alternate day and were HBsAg negative were enrolled in the study. The patients were randomly assigned to one of the two treatment group to receive either 0.5 ml (10 $\mu$ g) or double dose 1ml (20 $\mu$ g) of HB vaccine in a 01-2month schedule. After excluding hepatitis B virus infection, the vaccine was administered at a standard dose in group-A (0.5 ml or 10 microgram) and at a double dose (1 ml or 20 microgram) in group-B. After one month of the last dose, the seroprotection rate was measured and compared among sexes.

**Results:** The mean age of the participants in group-A was  $5.81 \pm 1.73$  years with a boy to girl ratio of 9:6 and the mean age of the subjects in group-B was  $5.65 \pm 1.68$  years with a boy to girl ratio of 8:7. The mean vaccine titer was  $25.60 \pm 19.97$  mIU/ml in group-A and  $617.47 \pm 292.11$  mIU/ml in group-B, with a significant difference



( $p < 0.05$ ) between the two groups. Irrespective of the dose, the mean vaccine titer was higher in girls ( $37.33 \pm 19.45$  mIU/ml) compared to boys ( $16.22 \pm 14.81$  mIU/ml) and the difference was statistically significant in group-A. It was also observed that the mean vaccine titer was significantly higher in girls ( $743.00 \pm 252.34$  mIU/ml) compared to boys ( $394.88 \pm 246.63$  mIU/ml) in group-B ( $p < 0.05$ , t-test).

**Conclusions:** The results of our study showed a reduced response to HB Vaccine boys with SSNS in comparison to girls

### Biography:

Tahmina Jesmin is currently associated with Bangabandhu Sheikh Mujib University, Bangladesh

### Recent Publications:

1. J Ped. Nephrology 2017;5(5)