MARKEDLY DECREASED ANTIBODY TITERS AGAINST HEPATITIS B IN PREVIOUSLY IMMUNIZED CHILDREN PRESENTING WITH JUVENILE IDIOPATHIC ARTHRITIS

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Hepatitis B is a vaccine preventable disease with intermediate endemicity in Greece. Patients with Juvenile Idiopathic Arthritis on immunomodulating therapy are prone to infection or reactivation of HBV. The aim of this study is to define the immune status against HBV in children newly diagnosed with JIA.

Methods: Case-control prospective study including 89 JIA patients and 89 controls matched for age and gender. Sera were tested for hepatitis B surface antigen, hepatitis B core antibody, and anti-HBs. Patients with anti-HBs titers ≥10 IU/L were considered immune. Data were analyzed with SPSS 18.0 version.

Results: Eighty nine JIA patients were included in the study (22 males), with a mean age of 6.7 years. In the JIA group 55% were HBV immune (anti-HBs level ≥10 IU/L) while in the control group 92% were immune against HBV (p< 0.001). Antibody levels in the patient group were significantly lower compared to the control group. The mean concentration of anti-HBs levels in JIA patients was 18.3 IU/L versus 82.6 IU/L in the control group (p< 0.001).

Conclusion: Results suggested that antibody titers against HBV in fully vaccinated JIA patients due to start treatment are significantly lower compared to matched healthy children. Diagnosis of JIA, older age and single versus hexavalent vaccination were associated with the absence of protective antibodies. Although there is no evidence to support the introduction of a booster HBV dose in healthy children who mount low antibody response following immunization, further studies are required to address this question in patients with JIA.